

FREE PRO-PLAN! | **SKYBUG ONE**
PART 2



VOL. 69 NO. 05 MAY 2026

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RCM&E

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POWER SCALE SOARING

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EVOLUTION
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Conscendo 2.0m



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Battery:
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EFL32250



EFL32275



Conscendo Evolution 1.5m



Wingspan:
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Battery:
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EFL01650



EFL01675



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Wingspan:
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EFLU32050



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SCAN TO EXPLORE THE RANGE



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<p>Durable & Wind-Resistant Build</p> 	<p>Radar detection range up to 350 m</p> 	<p>Easily Foldable for Storage and Travel</p>  <p>High-Speed Flight Up to 120 km/h</p>	<p>Self-Developed FC System for Precise & Stable Control</p>

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for A Realistic Pilot Experience

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Step 3

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- Shipping is available worldwide.
- Deposits are risk-free and fully refundable after the campaign
- All timelines are estimates and may shift slightly

Welcome

Welcome to the May 2026 issue of RCM&E.

Recently I've enjoyed reacquainting myself with an R/C flight simulator. It has been twenty or so years since I last spent any time using one so when the opportunity came along to test the Real Flight Evolution simulator from Horizon Hobby I didn't need asking twice.

I was so impressed with Real Flight that I took it with me when we visited our son and his family who live several hours away. Although he has not been an active model pilot for the last couple of decades, having been busy building his career and raising his young family, Dan has flown 'real' models with me from time to time and I've always been impressed with how quickly he is able to 'get back on his bike', so to speak, and within in just a circuit or two he is back performing advanced aerobatics as if he had never left the hobby. His true skill though is in flying model helicopters, with which he attained quite a high level in both 3D and F3C aerobatics. To get to that kind of performance he spent hours as a teenager flying an R/C simulator. I was therefore intrigued to know what he thought of a modern sim compared to his old one.

Upon taking the sticks and even with the switches in unfamiliar positions (it being before I learnt how to edit them in the software) he was soon up to his old tricks. I was mesmerised how all the old 3D manoeuvres came back to him and the two sticks soon became a blur as the tumbled the heli across the screen. All too soon it was over as his little one needed her next feed and sadly, we did not have the time to use the simulator again. But it was great to see that he had lost little of his skills, even performing rolling circles on his first go with a jet!

It was great to see and I'm still hopeful that he will return to the fold someday, alongside his younger brother, James, another great model pilot who is also taking a break from the hobby to raise his family and concentrate on his career.

Well, time flies and it's time for the May issue already. So, what's in store this time?

Tim Kearsley starts us off in style as he builds and flies the swept Bernard Cross



Flying Wing from MVM. Shaun Garrity (Retro Ramblings) is next with recollections of aeromodelling musicians before Kev Scott brings us bang up to date with 3D printing, discussing the wide range of filaments that can be used to make a model aeroplane. Power Scale Soaring stalwart Phil Cooke is back with more slope-side action as he celebrates the 40th anniversary of the PSSA. Then it's back to more jets, this time with turbines fitted as Thorsten Häs returns with part two of his Jet Power show report. Also returning is Lindsay Todd who completes and flies his Skybug One, along with the last two Pro-Plan sheets for this most unusual anhedral wing, H-tail, four-wheel cargo plane.

The second half of this edition begins with the aforementioned review of Real Flight's Evolution simulator before Keith Jackson (Aerobatic Scene) joins us with more pages dedicated to performing precision aerobatics. David Ashby (Just For Fun) follows, describing the maiden flights of his flying friends' winter builds before yours truly pens another RTFM column, this time covering firmware updates and new model downloads to our recently reviewed Spektrum NX8+ transmitter

I hope you enjoy reading it all.
Happy Flying!

Kevin Crozier

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On the cover

Photo: Andy Meade

The Power Scale Soaring Association turns 40 years old in 2026 and this UK based group of slope soaring enthusiasts are as active as ever! This month Phil Cooke provides an overview of 2025's highlights and explains what's in store for the PSSA's 40th anniversary year.





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UKF3A WORLD CUP COMPETITION 2026



UKF3A will host an F3A World Cup competition at the Phoenix Model Flying Club on 13 - 14 June 2026 on behalf of the British Model Flying Association.

The Phoenix Model Flying Club is located in Hertfordshire, adjacent to the M25 motorway, junction 22, to the north of London. The club offers the luxury of dawn-to-dusk flying where the 110 m x 130 m grass field has a flightline perfectly oriented for F3A, with the sun rising and setting just outside the F3A box for unobstructed visibility.

The clubhouse provides mains electricity, kitchen, plus charging benches and toilet facilities.



F4C WORLD CHAMPION CORRECTION

On page 26 of the April issue, we added an archive picture of David Law's F4C World Championship winning Pitts Special to Danny Fenton's 'Make It Scale' column but inadvertently changed David's nationality in the caption that is published below the picture. We would like to make it clear that David is from Australia, not the USA. Our apologies go to both David for this error and also to Danny Fenton for adding this erroneous caption into his column.



MODELAIR MAYFLY

James Gordon from ModelAir has sent more details of this year's MayFly event as it moves home from Old Warden to the BMFA National Centre at Buckminster:

"The idea of the MayFly event is to bring modellers of all disciplines together again and hopefully make it as similar as possible to our events at Old Warden. We are going to make it a Fly-In that is as relaxed as possible for all types of models, with hopefully the usual car booters and trade that always supported us before. While this is not Old Warden, we hope to bring some of that Old Warden magic to Buckminster by getting people back together again while also supporting the BMFA National Centre, which is a superb facility. We are very grateful to Manny and the team for giving us the opportunity to run our event there.

While I guess it won't be as big as before at first,

we really hope it will be a success and that people really enjoy themselves. It will also hopefully keep the ModelAir name going until such time as we can maybe return to Old Warden one day. If it works well, maybe we can make it a regular event to add to the Buckminster calendar and even if we do return to Old Warden, we are still very keen to carry on supporting the National Centre going forward.

At our last events at Old Warden, we were very keen to attract the younger generation and that will also be one of our aims for Buckminster too. It really is open to all sorts of models, from vintage through to 3D, with everyone welcome. All the pilot information and eligibility are on our website: <https://www.modelair.info/>"

The ModelAir Mayfly will take place at BMFA Buckminster on 30th - 31st May, 2026.



INTERNATIONAL FLYING CIRCUS 2026

The International Flying Circus celebrates its 30th anniversary from June 25 to 28, 2026.

Back in 1995 model gliding pioneers were searching for an alpine slope flying area and found a special location in Fiss on the Schönjoch. The Schönjoch in the Tyrol offered ideal conditions with a high starting point, easily accessible by cable car, reliable thermals and flyable in almost any wind direction.

On 11 July 1996 the Flying Circus took place for the first time, with many slope soaring pilots, glider manufacturers and spectators, especially from Germany, Austria and Switzerland (collectively known as the DACH region) in attendance. The aim was to make high altitude slope soaring accessible to all model flyers and this special event developed quite quickly. Participants now extend from far beyond the DACH region, even from outside Europe.

All model gliders are welcome, whether foam, wood or composite, and whether pure soarers or electric powered. Pilots must label their models with an eID number and must be able to control their model. Proof of insurance and proof of competence (A1/A3) must be



presented on site in order to register. A special take-off permit is obtained for the Flying Circus, the runway is cordoned off and the whole event is controlled by air traffic control. Larger gliders can remain on the mountain and are locked away overnight in a depot. Pilots and visitors can obtain food and drinks

at the site and permanent toilet facilities are available. Selected experts from the Flying Circus team and participating manufacturers will be on hand to assist rookie pilots. Rookie Day is designed to help people get started in slope flying in general, or high-altitude slope flying in particular.

Many international pilots have already registered online for 2026. A non-binding online registration via the homepage (www.flying-circus.de) simplifies the subsequent registration on site.

So far CRG, Horizon Hobby, uniLIGHT, FW Models, ASC-Safetylight, CNC-Luftsporttechnik, Samba Models and CHAServo have confirmed their participation in the Flying Circus 2026, so for soaring enthusiasts this is an ideal opportunity to examine the various models and technology used by the team pilots and to discuss new projects with the manufacturers and their teams.

Thorsten Häs



A large graphic for the event. At the top, it says "25.-28.6.2026" in yellow. Below that, "EVENT No. 30" is written in large, bold, yellow letters. The background is a scenic view of a mountain range with snow-capped peaks and green valleys. At the bottom, the text "Flying Circus" is written in yellow, with a yellow arrow pointing right between the words. Below that, "faszination alpinflug" is written in white. In the bottom left corner, there are logos for "Österreich", "Tirol", and "Serfaus-Fiss-Ladis".



BERNARD GROSS FLYING WING

Tim Kearsley chooses an eye-catching design from
Modern Vintage Models as his winter build

Words & Photos: **Tim Kearsley**

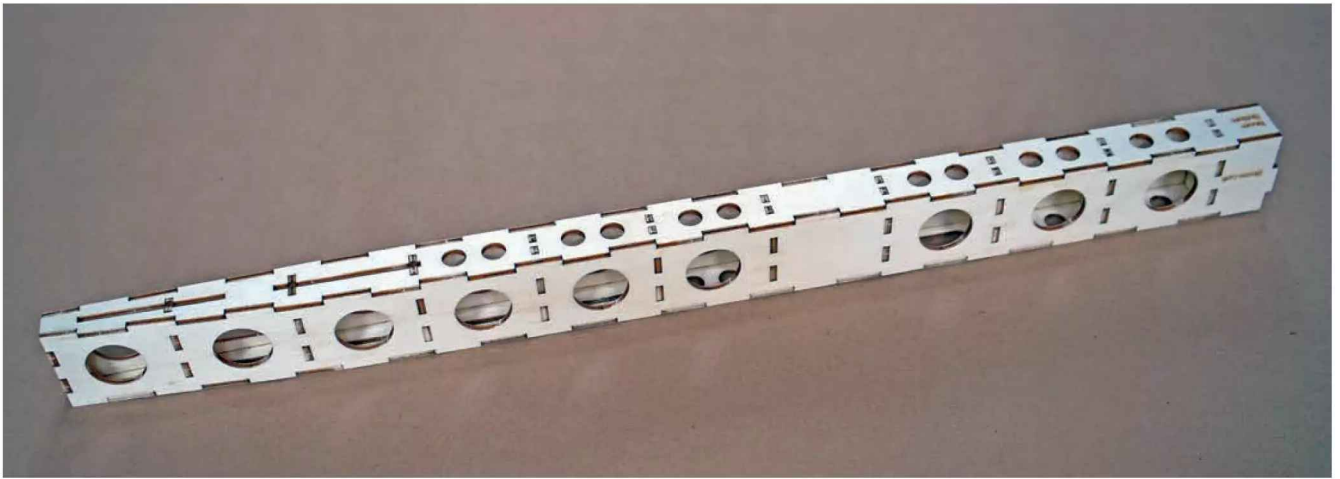
Around September or October, I generally start thinking about what to get on the building board for the winter season. While browsing a copy of RCM&E, I came across Modern Vintage Models (MVM). MVM, the brainchild of Jorgen Pedersen, do exactly what the company name suggests – take vintage designs and bring them into the modern era, using modern technology and materials to produce beautiful, laser-cut kits. My eye was drawn immediately to a large

flying wing design, the Bernard Gross Flying Wing. Spanning 94 inches (2.4 metres) this is a model that was designed by Bernard Gross in 1948, obviously for free flight. The wings are swept back, and the fuselage is a pod and boom design with a fin and large rudder but no tailplane. Elevons on the wing tips provide pitch and roll control. Thrust is from a pusher prop behind the wing.

I didn't hesitate to flex the plastic! MVM sell the kit in modular form, so that you can

buy the wood pack, electronics and hardware separately. However, I chose to order the complete kit which includes everything you need except covering material. A couple of days later a large box arrived!

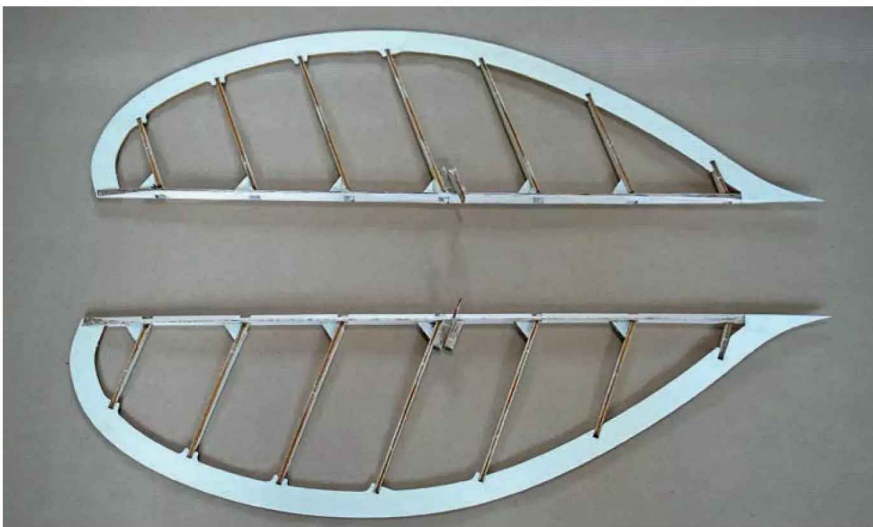
On opening said box the first thing that struck me was the exquisite laser cutting. It really was by far the best I'd seen. Much of the kit is 3 mm lite-ply and good quality material it is too, with a beautifully smooth finish and warp-free.



Fuselage construction starts with the boom. Laser cutting throughout was superb.



Completed fin and rudder assembly.



Completed elevons.

Builders used to conventional builds might be surprised to find that the Gross Wing kit includes no plan. A plan, however, isn't required. The kit is built entirely from interlocking components and is built 'dry' and then thin cyanoacrylate (CA) glue is

wicked into the joints to fix everything solidly together. What you do get in lieu of a plan is an extremely comprehensive, very well illustrated instruction manual which runs to some 82 pages! Now what you should do of course is to read this thoroughly before starting to build.

I wonder how many of us do so? Impatience got the better of me and after a brief scan I succumbed to temptation and broke out the scalpel and sandpaper.

STARTING THE BUILD

I followed the order of building exactly as detailed in the manual and it all starts with building the fuselage boom. As with most of the kit, this is from 3 mm lite-ply. I said earlier that CA glue is used to fix dry-fitted components. I'm not a fan of CA, preferring most of the time to use De Luxe Materials SuperPhatic in preference to CA. It wicks in just as well but gives you some 'wriggle room' before setting. It is also a lot easier to sand and is equally as strong as CA. I chose therefore to assemble the boom components with a mixture of conventional aliphatic resin and SuperPhatic. The parts fitted together perfectly and the structure was soon complete. It's worth taking the extra few moments to sand the 'pips' left on the components from where they were attached to the master sheet. It takes hardly any time and ensures things fit together tightly. It's worth mentioning that every single laser-cut component is labelled so there's no excuse for getting it wrong!

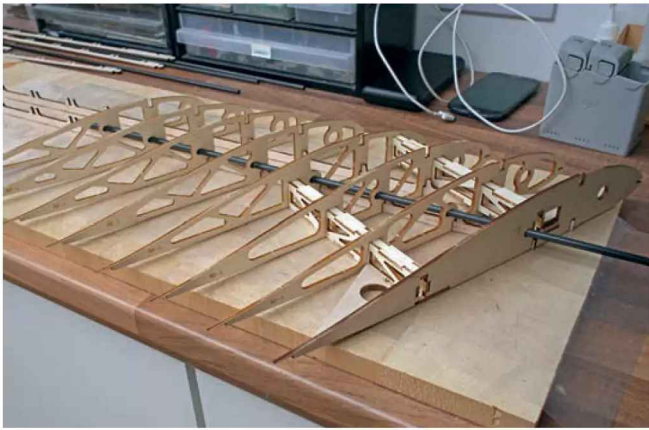
CONTROL SURFACES

The fin, rudder and elevons are next on the list, assembled from lite-ply ribs and a balsa frame. These were assembled with aliphatic. When dry, the rudder post and elevon leading edges were chamfered with a razor plane and sandpaper to ensure the control surfaces had free movement.

With the control surfaces built, attention turns to the wheel box. The Gross Wing uses a single, central wheel and this is largely enclosed by the wheel box. Construction is straightforward using a mix of aliphatic and SuperPhatic (or CA).

WING ASSEMBLY

Assembly moves on now to the wings. The wings are supported by 6 mm ply wing braces which slide into boxes built into the wing structure and are prevented from moving with an M4 screw which passes through a ply plate in the fuselage. These boxes take



The wing boxes take much of the wing loads.

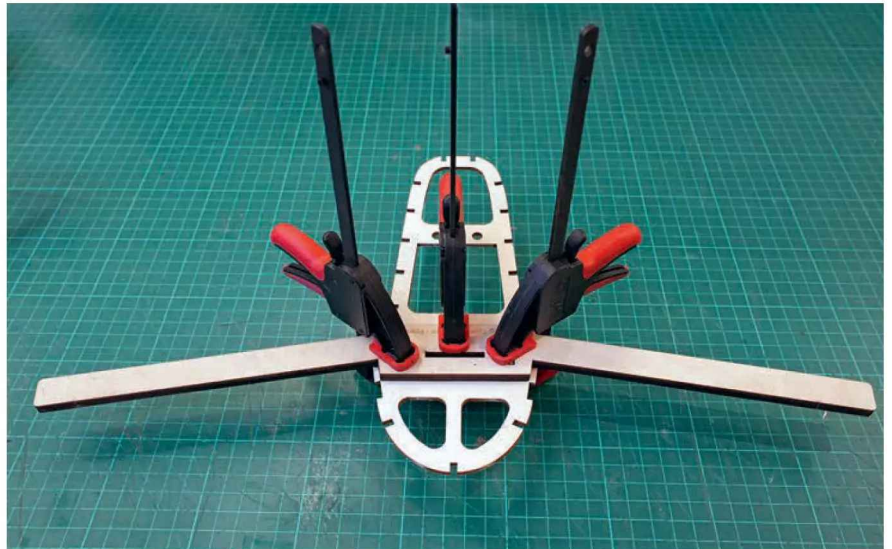


First wing well under way, with the trailing edge being added.

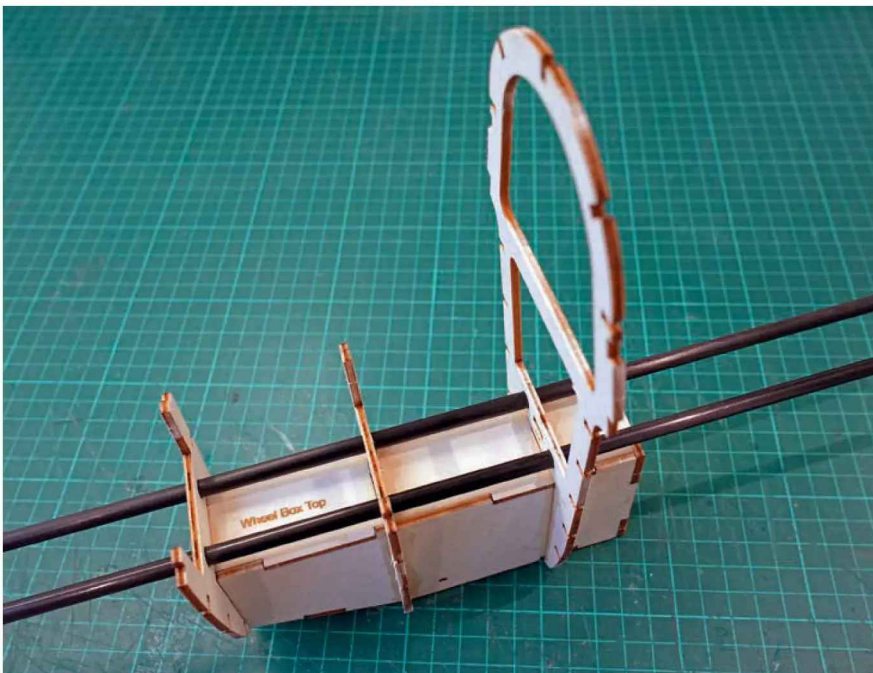
most of the load of the wings and need to be constructed soundly. Also, the ply braces need to be as snug a fit inside the boxes as possible to avoid any unnecessary 'slop'. The boxes are built first and then integrated into the first four ribs. It's crucial to avoid getting any glue on the inside of the boxes so as to ensure that the ply braces have an unimpeded fit.

The main wing assembly is fairly conventional. Ribs are from lite-ply, as are the spars. Additionally, for strength, a 6 mm carbon tube runs the length of the wing. Assembly consists of adding ribs one at a time to the bottom spars and inching the carbon tube through each rib as it is added. All of this is done dry - no glue yet! The top spar and leading edge follow and then it's time to glue it all together. This is quite a long job, as CA or SuperPhatic must be wicked into every rib-spar joint and rib-leading edge joint. Note that the carbon spar is glued a little later.

Wing assembly continues by adding the lite-ply trailing edge. Here I used conventional



Adding the first wing brace to the fuselage.



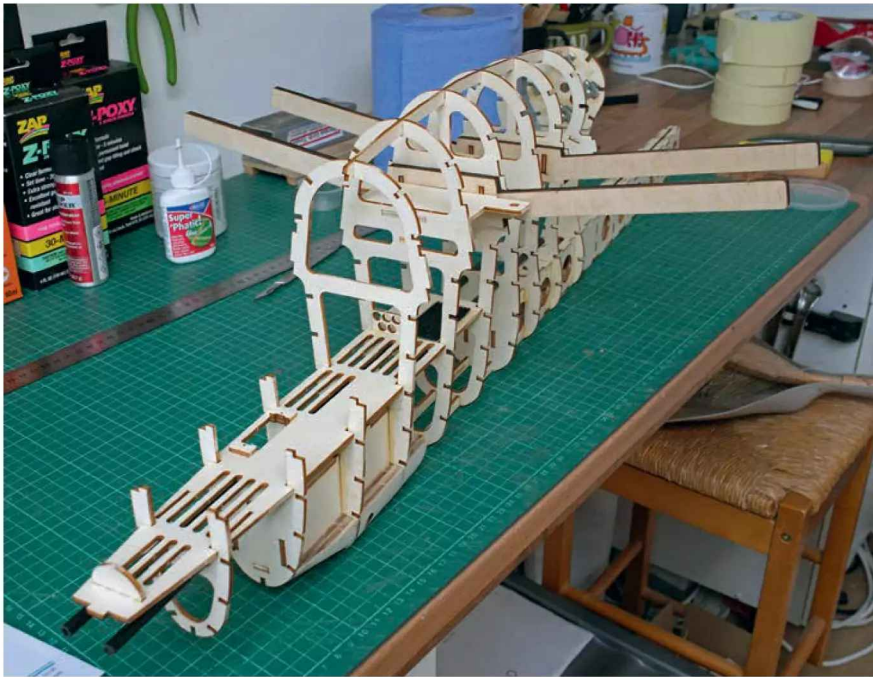
Starting the fuselage build. Note the carbon tube guides.

aliphatic, holding the ribs in place with small clamps. Stiffeners are added to the back of the main spars. The frame for the wing servo is built at this point and the outer wing structure is strengthened by adding lite-ply stringers between the outer ribs. Once the frame is built the wing servo can be screwed into position and the servo extension lead run through the holes at the front of each rib back to the root rib. Note that a one metre servo extension lead is required for this.

Now the carbon tube spar is glued to each rib. Here I followed MVM's recommendation and used small dabs of Gorilla Glue. This has the advantage of expanding to fill the gap between spar and rib. Small triangular gussets of 6 mm balsa are added between the ribs and the back of the top spar.

Once the glue has thoroughly dried the wing can be sheeted, top and bottom, from the main spars forward. MVM supply 1/32" (0.8 mm) balsa for this. This thin wood was easy to bend to the rib profile and glue in place with aliphatic. Lots of masking tape held it in place while the glue dried.

The final job with the wing is to cut out pieces of balsa sheet to match the curve of the wing tip. MVM provide a template at the back



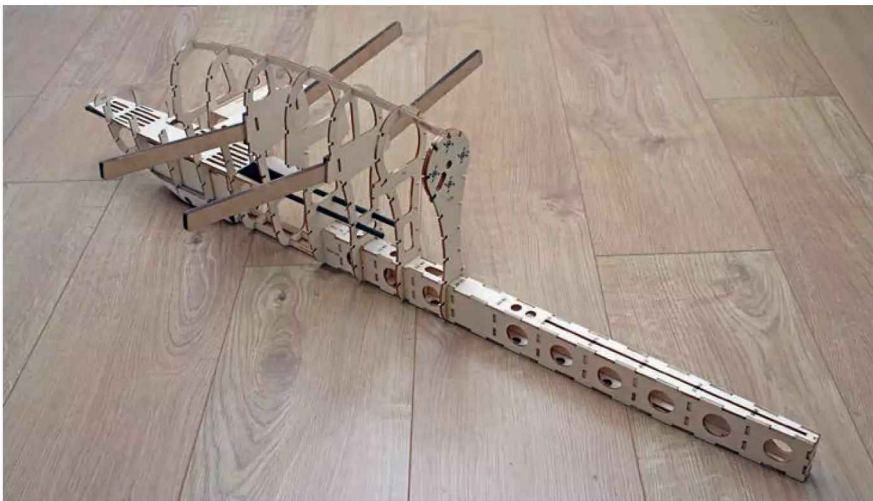
Fuselage formers, floor pan and second wing brace added.



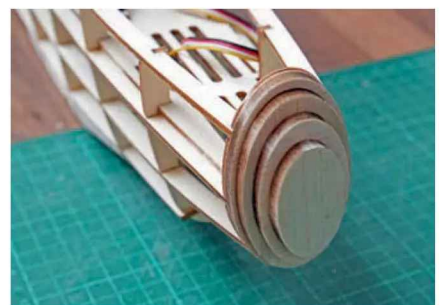
Motor installed on former F1.



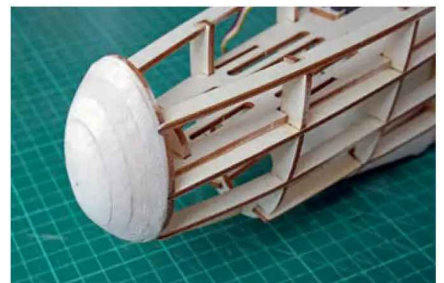
Motor fairing.



Another view of the fuselage showing the motor mount at rear.



Nose cone before shaping...



...and after shaping to a smooth profile.

of the instruction manual for this. Applying these two final pieces of sheet is tricky because they have to follow a slight compound curve. Medium CA and kicker helped here.

BODY WORK

After building the second wing it was time to have a look at the fuselage. It was at this point that I realized why MVM had included two further lengths of carbon tube, apart from the wing spars. They are used to ensure alignment as the fuselage is built and are removed at the end - clever! Fuselage assembly begins by gluing formers and the two plywood wing braces to the wheel box constructed earlier and the fuselage boom. The aforementioned carbon tubes are threaded through holes in the formers to ensure the structure is aligned correctly. The rearmost former includes blind nuts for the motor mount. These are designed

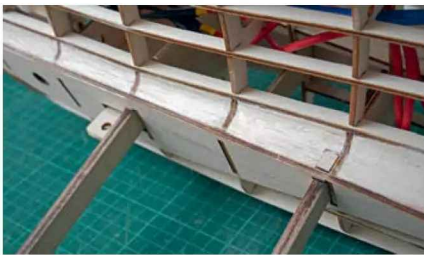
for the motor supplied by MVM so be aware that if you use a different motor the holes may not be in the correct position! The floor pan is added at this stage also.

Rudder control is via a snake and the outer for this is threaded through the fuselage boom and up to the servo position towards the front of the fuselage. A dab of Gorilla glue where the snake exits the rear of the boom and at the anchor point at the servo end holds things firmly in place. Some of the fuselage stringers which run from front to rear are added at this point and the rudder servo can be installed. Incidentally, the three servos used in the model are all mini-sized items such as Hitec HS85MG or similar.

Next up is the canopy, which is a simple lite-ply skeleton structure. I built it as supplied but it wouldn't be difficult to fabricate a plastic canopy which, to be fair, would probably →



Fuselage almost complete with stringers added.



Wing fairings are formed from soft balsa block.

look better. The canopy is held in place by a peg at the front and six powerful magnets at the rear.

The motor fairing and shroud are built from pieces of 6 mm balsa glued and then sanded to a smooth profile. The motor is installed at this point along with the ESC, remembering that the motor must rotate *clockwise* when viewed from the rear of the model as it is in a pusher configuration.

Final tasks in finishing the fuselage include adding some sheeting around the fuselage ribs and building the fairing between the fuselage and underside of the wing. MVM suggest doing this with small planking strips. I took the lazy route here and formed the fairing from soft balsa block. Adding the nose cone, formed from 6 mm balsa pieces sanded to shape and fitting the single, central wheel completes the fuselage.

COVERING & FINAL SETUP

I opted to cover my version of the Gross Wing with Oratex, in a black and yellow scheme. Once covered, the control surfaces can be attached. MVM thoughtfully laser-cut slits for furry Mylar hinges, five for the rudder and six in each elevon. A couple of drops of thin CA on each hinge fixes them firmly in place. Finally, the covered fin and rudder assembly is glued into the slot in the boom and the tailskid attached to the underside. I used 30-minute epoxy for these.

The first attempt at fixing the wings to the model showed that, not surprisingly, a little fettling was necessary to achieve a smooth fit of the wing boxes onto the ply braces. A little

judicious use of a sanding block soon had them sliding nicely together. An M4 screw holds each wing in place. MVM supply a 9 x 6 prop and this was balanced and fitted to the motor, remembering of course that it fits on backwards in the pusher arrangement.

The Centre of Gravity was deemed by MVM to lie just on, or slightly in front of, former F2. With a 3S 2200 mAh battery sitting comfortably alongside the rudder servo the CG seemed just right, being a few mm in front of F2.

I used a FrSky six-channel Rx as only four channels are needed (throttle, rudder and two elevons). Using my FrSky Horus Tx it was simple to set up the model as a V-tail and then swap the rudder channel for the aileron. I set up the throws as detailed in the instructions but, to be honest, they looked huge! I therefore also set up three rates in the Tx to include 75% and 50% of full travel. Expo is a personal choice and



She will rise off ground if assisted during take-off by supporting the rear of the model and keeping the wings level.



Completed model ready for the maiden flight.



MVM's Bernard Gross Flying Wing is perfect for flying calm days and summer evenings.

I typically don't use it, except sometimes on rudder to calm down 'squirrelly' take offs.

I always use a wattmeter on a new model to measure the maximum current draw at full throttle. The Gross Wing measured 41A, about 440W, on a fully charged 3S LiPo.

FLYING THE WING

Amazingly, I didn't have to wait at all to carry out the maiden flight. The day after I completed the model the weather was forecast to be sunny and with a very light breeze. The day dawned and looked good, so I agreed to meet a clubmate, Jeff, at the patch. After a range check and a thorough check that all control surfaces were moving in the correct sense it was time for the moment of truth. Jeff agreed to carry out the first flight (he's a far better pilot than me) while I took some photos. We toyed with the idea of whether to hand launch the model or attempt a take-off from the rather wet grass strip. In the end we

opted for the latter. Another clubmate, Gareth, assisted with the take-off by supporting the rear of the model and keeping the wings level. A burst of throttle, a gentle push from Gareth and she was rolling. It needed full throttle and a fairly stiff application of elevator to get her off the ground but away she went. After a little elevon trim for roll she settled into a stable flight.

As I'd thought, the full rates were a bit too enthusiastic and we dropped down to the 75% rate on elevons. A climb to a decent height and a stall check revealed a very benign nod and nothing more. Jeff brought her into land after four minutes as I had no real idea how long the 2200 mAh battery would last. The landing was very smooth and a check of the battery revealed 67% remaining, so I reckon flights of eight minutes or so are feasible.

I took the sticks for the second flight and found that the Gross Wing can be flown as a three-channel model perfectly well by using



A stall check at a decent height revealed a benign nod and nothing more.

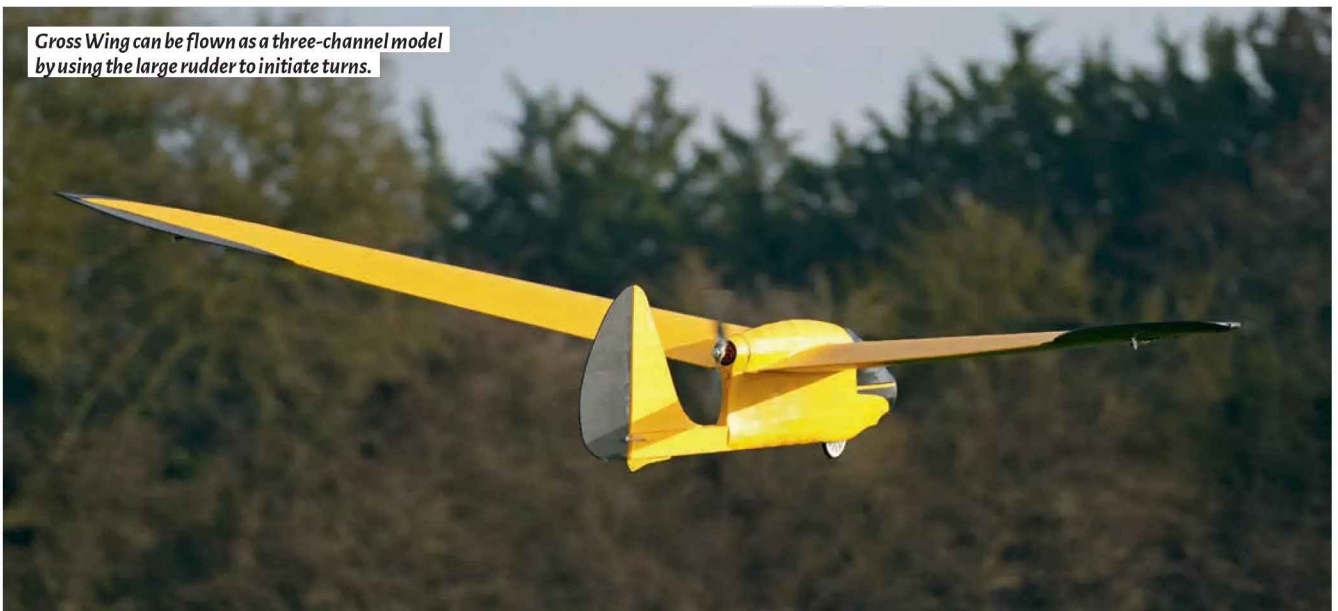
DATAFILE

Model:	Bernard Gross Flying Wing
Model type:	Flying wing
Manufacturer:	Modern Vintage Models https://modernvintagemodels.co.uk
RRP:	£439 (full kit)
Wingspan:	2388 mm (94")
Length:	114 mm (4.5")
Weight:	2090 g (74 oz)
Motor:	D3536 1450 kV brushless outrunner
Functions (servos)	Elevons (2), Rudder (1), ESC
LiPo:	3S 2200 mAh

the large rudder to initiate turns. Equally, the elevons are effective also. I found that around half-throttle was all that was necessary to guide the model around the sky in a very relaxing manner.

This isn't a model for aerobatics or hooning around. But why would you want to? It's a 1948, free flight design and is just perfect for calm days or those lovely summer evenings. I'm looking forward to lots more gentle flights with the Bernard Gross Flying Wing. ■

Gross Wing can be flown as a three-channel model by using the large rudder to initiate turns.





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Designed & Manufactured in England.

1948 Bernard Gross Flying Wing *Rapid Build*

New V3.5
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A unique and innovate design years ahead of its time.
A true powered floater that can stay aloft for hours
given the right conditions.

V3.5 now with fully sheeted fuselage.

This is a full wood pack that includes carbon
and the control snake. Requires some hardware,
electronics, propeller and wheel etc. to finish.

- Wingspan 94" – 2388mm
- 4 Channel – Elevons, Rudder and Throttle



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.



Designed & Manufactured in England.

MvM Howard DGA-3 Pete *Rapid Build* £165.00

This premium quality kit contains about 300 precision laser cut parts and can be assembled and covered in just a few days.

4 channels Ailerons, Elevator, Motor, Rudder
• Wingspan 40" – ~1016mm

Recommended Equipment – NOT INCLUDED

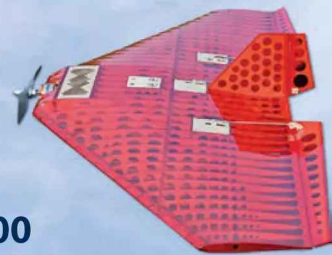
- Hardware
- Carbon tubes and wing tubes
- Power – D3635 - 1250-1450KV
- Battery – 2200 mAh 3 Cell Lipo
- 4 Servos – HS85MG, HS5058M, MC1703MG
- ESC 30 Amp
- Receiver
- 9x6" propeller
- 43-45mm Spinner
- 2x 3" wheels



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MvM Oldtimer *Rapid Build*



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Vic Smeeds' Shove Ha'Penny



Introductory Offer

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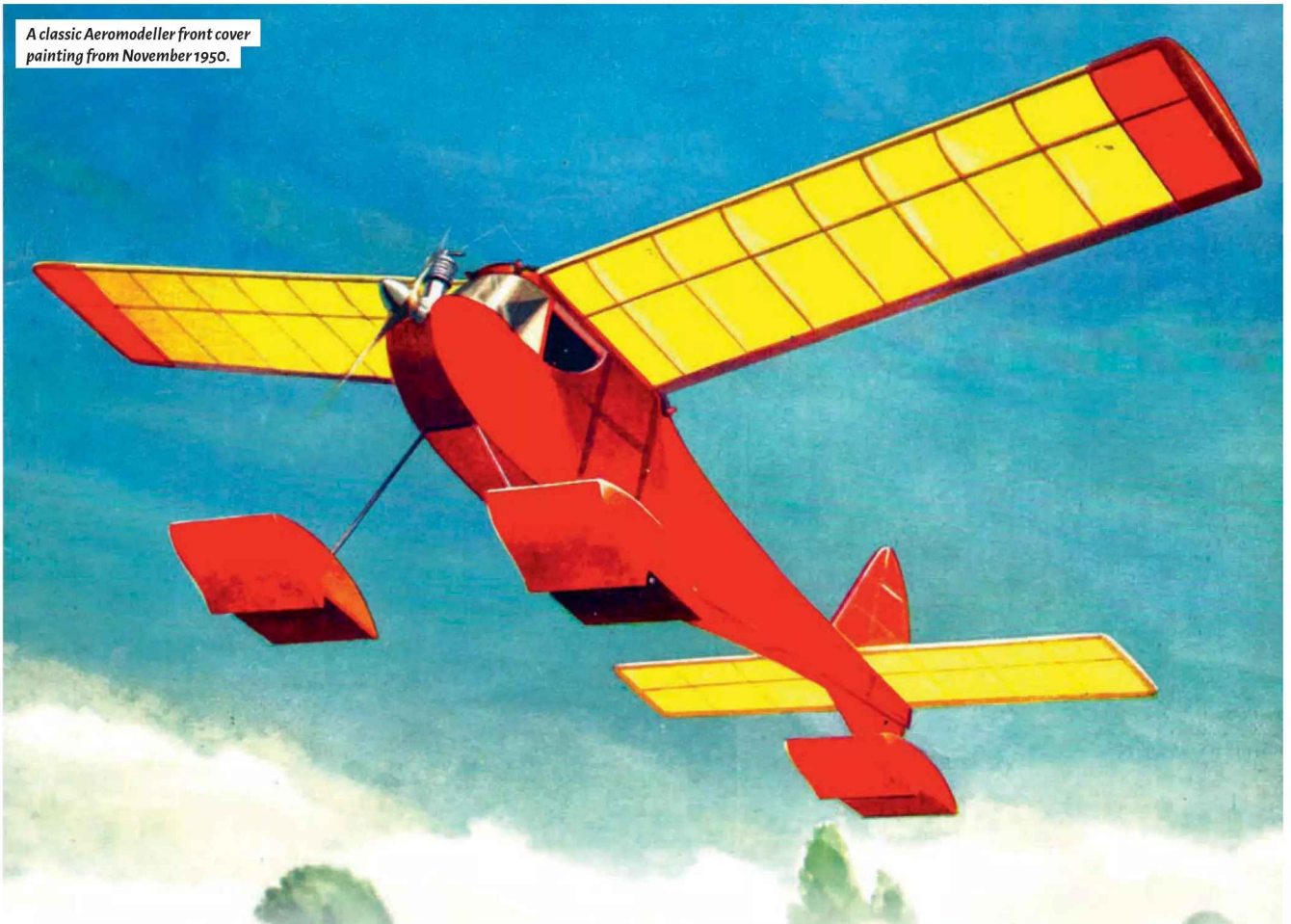
MvM Boomer Bus *Rapid Build*



£149.00

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.

A classic Aeromodeller front cover painting from November 1950.



RADIO CONTROLLED MUSICIANS

Shaun Garrity temporarily (we hope!) puts his retro radio repairs to one side to breathe new life into his collection of guitar effects pedals

Words & Photos: **Shaun Garrity**

Confused? Let me explain. The kids have flown the nest, parties that finished at 6 am are no more because the lead is slowly running out of my pencil and being a proud Yorkshire man, it doesn't sit well heating rooms in my house that I haven't been in for at least nine months. So, the decision to downsize has moved up the priority list. With this in mind, I decided to look through my many years of carefully stored loft booty and see what I could divest.

The first boxes I came across were from my rock band days. It was only recently that I had picked up my axe again after a 20-year hiatus

so I could torture the customers at a local open mic night, together with a dear friend whom I used to perform with.

A plethora of cables, sheet music, spare strings, a box of very dead Ever Ready 9V batteries, plectrums and a solitary tuning fork were removed to reveal my prized effects pedals such as a Wah Wah, Fuzz Box and Phaser etc. Now, where am I going with this, you may justifiably be wondering?

Well, did you know that several musicians partook in our great hobby? Remember Mike Oldfield of Tubular Bells fame, whose music featured in that great 'family movie', The Exorcist. He was a fan of R/C slope soaring and

frequented Hergest Ridge, bordering England and Wales, with his Graupner Foka. I believe his recording studio was nearby. Like some R/C modellers he was also a qualified light aircraft pilot and also flew helicopters.

Another fan of stirring the sticks was Daniel Boone, the multi-million hit seller with songs like 'Beautiful Sunday' and 'Daddy Don't Walk So Fast'. A member of the West Essex Club, he had several R/C models, a free flight Keil Kraft Gaucho and even built one of his R/C transmitters. I remember reading an Aeromodeller article from the 1970s in which he said, "*Flying models is an ideal way to relax. The public don't realise what a strain making*

Graupner 1969 de luxe KITS

This month we feature the GRAUPNER range of GLIDERS and SAILPLANES. There's a size and type to suit your particular requirements... sport or contest flying... free flight or radio control. Every one a quality kit noted for its superb prefabrication... and completeness!

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43" span super beginners model with easy construction and a super performance. For free flight only - sport or contest flying! (Ideas for use as a club trainer for junior members)

63" span **DANDY**

de luxe kit only **£5.19.6**

Extensively prefabricated for 'Quickie' construction. Absolutely complete kit.

Super kit includes die-cut sheet, pre-shaped fuselage parts, milled and slotted birchwood, canopy, cement, tissue, decals, etc.

Power pylon kit 19/6 extra.

AMIGO II **£6.10.0**

Here's a 79" span CONTEST TYPE sailplane, specially developed with R/C in mind. Fully prefabricated kit in balsalamin. Pylon engine mount 18/6.

SASSAFA 51" span **17/6**

POUGA S.V.L.P.H.E. (latex) 12 1/2" **BEGINNER** 38" span P/F/ 45/-

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An exact scale model, 79" span, equally suited for free flight or R/C. Kit includes FULLY FINISHED foam plastic fuselage, fully prefabricated parts for built up wings, etc. Also available as AUXILIARY SAILPLANE with pylon power egg. Pylon engine mount 22/6.

HS 19 CLOU ... **£13.5.0**

Here's a superbly MULTI-POSE model. Fly with 79" span wing for towline soaring, or 75" span for slope soaring (parts for either kit). Also fly as POWER MODEL with detachable fuselage. Free nose, tower, R/C in flight OR R/C in each case!

FOKA DE LUXE R/C SAILPLANE

102" span **£11.12.6**

Spare fuselage £4.2.6.

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This fabulous kit includes a FINISHED ONE-PIECE FUSELAGE incorporating wing mounts and fairings in high-strength plastic, other parts in balsalamin and ply (mostly fully shaped), shaped wire parts, canopy, tissue, decals, cement, etc., etc.

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OTHER Graupner Agents include:-

USA: RICHIE MODEL HOBBIES, 101 1/2th Ave, New York, N.Y.	AUSTRIA: PAUL GRONWANN, Im Tannenwald, Jochen HUBER.	HONG KONG: SENGAR CO. LTD., 2 Cheung Yee Street, Sham Shui Po.
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Daniel Boone was another pop star who would relax from the rigours of the music industry by flying model aircraft. Picture courtesy of Aeromodeller.

Graupner's FOKA (bottom right) was the glider of choice for Mike Oldfield when not in the recording studio creating his next hit.



One of Daniel's favourite free flight models was the KeilKraft Gauchito. It offered good performance on a budget.



Young Garry with his Gibson 335 rocking the masses.

records can be. Sometimes I work all night in a dimly lit studio and in the morning, I get out onto the hill to fly the planes instead of going to bed. The room where I write my songs faces the workshop so when I finish, I can pick up a model and put in a couple of hours on it."

Getting to the point of this classic Garry ramble, I decided to test out the effects pedals and where necessary, attempt to get them going again. Fortunately, they were all from the era where generally transistors, not integrated circuits, were the norm (not unlike radio gear of that era) and with my limited old school analogue electrical knowledge I had at least half a chance. I've been having a whale of a time fixing them up, so much so that I've decided to actively look out for more from the 60s and 70s to repair, whether I need them or not. It makes a change from breathing life into old transmitters, receivers, actuators and bringing them back from the dead. So, fellow R/C musicians, if you have any suitable abandoned foot stomping junk languishing in your loft, please get in touch and let's do a deal.

Just an afterthought: Getting more stuff wasn't the plan, but who cares. As the great old capitalist, Malcolm Forbe's, saying goes, "He who dies with the most toys, wins." But I won't tell my dear, sometimes understanding, wife. Oh, I can feel that a new handbag or shoe bribe might be necessary...

ITSY BITSY TEENIE WEENIE TRANSMITTERS

Back in the dark ages at the dawn of R/C, transmitters, receivers and actuators (servos) were huge. This was down to the technology available at the time required to build these electro marvels of the age. Valves (tubes), coils, large paper capacitors, carbon resistors and 120 volt batteries in transmitters and a large battery compliment of 45 volt batteries, along with AA and C sized cells, valves, relays, reed banks in receivers, were the norm. ➔

ED (Electronic Developments), also known for their great range of slogging diesel engines, set the standard with their ground-based units, utilising aerials that seemingly extended up to the stratosphere to get them to transmit (often referred to as tank aerials). The cases were large enough to keep spare tools and your sandwiches in (and possibly your pet rabbit) but were far too big to be handheld.

With the advent of transistors, you would have thought things would change. Well, it did, but slowly and at a price, as they were very expensive components. Laughable these days, but many constructors wouldn't solder them in place, preferring to use sockets so that transistors could be plugged in and taken out and used in other projects.

As the price dropped the race was on to miniaturise transmitters and airborne components and be the smallest. Initially hybrid solutions were sold, still using cheaper valves in the transmitter with a mixture of valves and transistors in the receiver. Actuators (servos) were operated by using a clever system of switching, utilising relays in the receiver and a board with multiple copper tracks and wipers in the actuator, so miniaturisation wasn't an issue here as they only had an electric motor and gears inside.

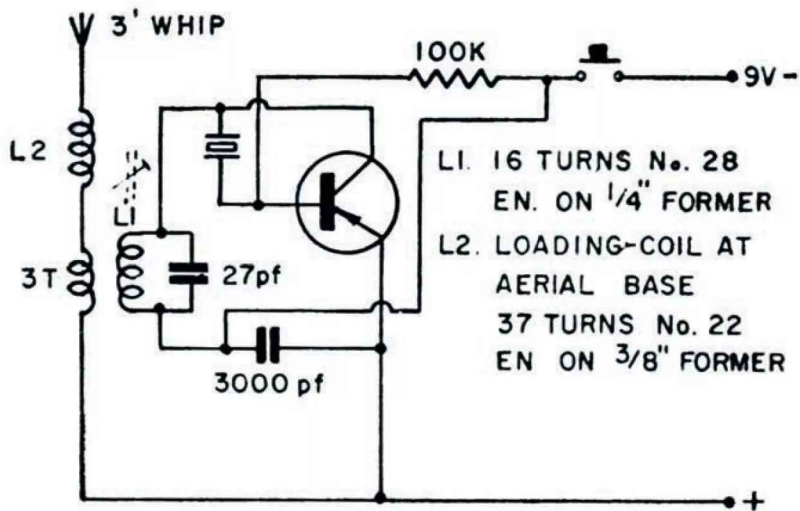
The race was on! Before commercial sets were available, talented enthusiasts would publish their radio designs in RCM&E, Aeromodeller and Model Aircraft magazines in the UK.

One very simple carrier wave set I remember building was called the RAMECO Mini Tx. Published in RCM&E, May 1961, it was about as basic as you could have it. One transistor, one resistor, a few capacitors, one crystal and some coils. Obviously, the range wasn't epic at around 400 ft, even when using a 5 ft aerial. It was offered as a complete kit for 117/-, or just under £6.00, so not cheap in the day. I would guess it was of little use for aircraft but was fine for boats and cars. It was even suggested by the designer that it could be installed in aircraft for telemetry purposes! Pipe and dream come to mind...

Futaba, along with OS, were one of the first companies to offer affordable miniaturised gear. A range of single channel (button only) sets appeared quickly, the styling reminiscent of early transistor radios that proliferated from the Far East. So, mini transmitters were becoming a thing.



When transistors became affordable and replaced valves (tubes) a significant difference in the size of R/C transmitter cases happened.



The RAMECO carrier wave Tx was the same as the ED in how it functioned but had less range due to the very simple design. Still, you could easily fit a dozen of them in the ED case.



With the advent of transistors, OS and Futaba produced some very small, almost palm sized transmitters. They set the standard for what could be achieved.



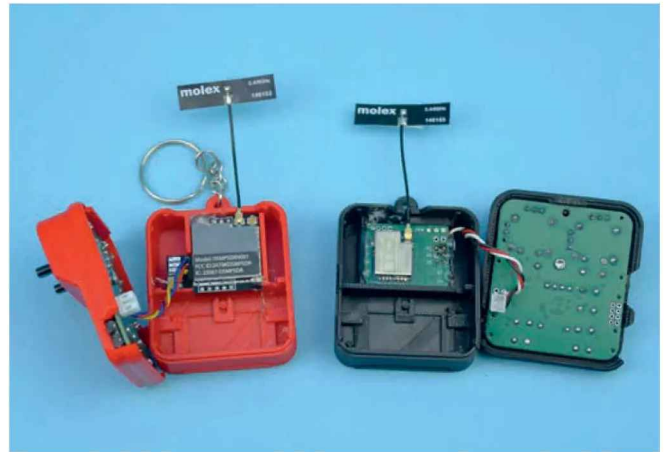
Phil Green's own designed 'Lock Down' micro two channel, full range proportional transmitter.



The joystick was from a PC game controller, with the LiPo from a discarded vape.



It's hard to believe when sitting next to this Multiplex set but Tobe's latest micro-Tx is full range, fully featured and has eight model memories.



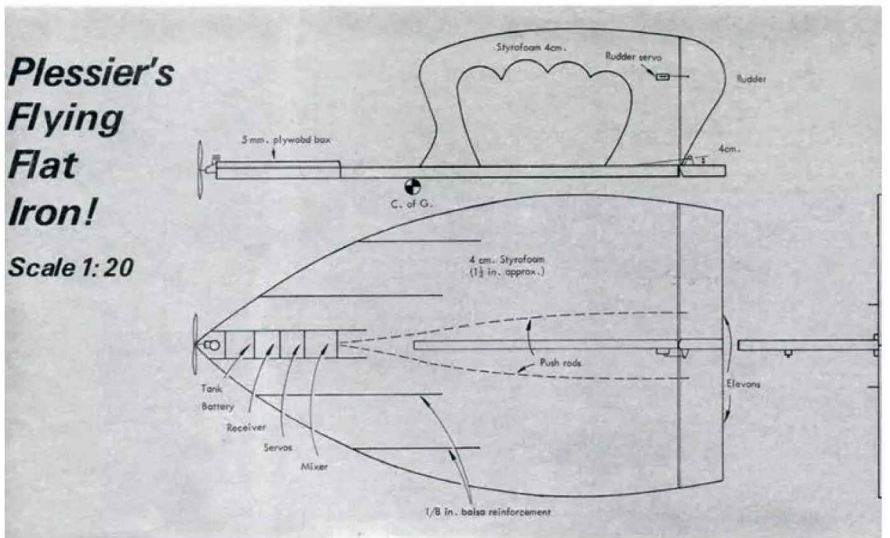
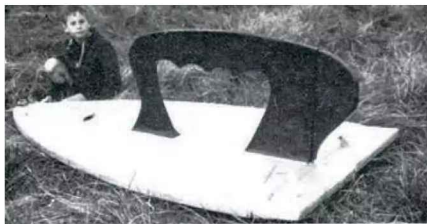
Two versions have been developed, one being Spectrum compatible using a Lemon RF module (red case) and Tobe's version of the nRf system (black case). I got the Lemon module from Lemonrxeurope, the UK importer on eBay.



Scan the QR code with your phone's camera to see Phil's micro-Tx in action.

Roll on lockdown (2020, just in case it has slipped your mind) and Phil Green now had more time on his hands, like most people on the planet, so he took the opportunity to design an nRF based seven channel proportional 2.4 Ghz Tx and matching Rx. Extensive testing proved its reliability and subsequently, after having a discussion with a pal about size, Phil decided to see just how small a full range two channel proportional transmitter could be made using a stick unit from a game controller. His endeavours can be seen in action if you scan the nearby QR code.

Let's make another time jump to 2026. Again, two pals were discussing mini transmitters and, jokingly, Tobe said to Mike, how about a full range, four channel, Key Chain version. Mike had just designed a very small encoder with eight memories, OLED display and all the features of a regular modern Tx, so the challenge was on. This latest mini marvel has a custom designed 3D printed case and can use Tobe's version of nRf or a Lemon Rf module for Spektrum compatibility. It's so small you could leave it in the model, so you'll never forget to take it to the flying field! There's a chance they may go into limited production (on demand), but it's very early days at the moment.



Francis Plessier's huge unorthodox Flying Flat Iron flown at the annual Storks Circus RC event in 1976.

LE CIRQUE DES CIGOGNES

At the end of the show flying season in France, the Storks Club held their annual event, the Stork's Circus. It was 'the' place to go to see everything the trade could offer and all the latest and greatest models were displayed and flown. The 1975 show, despite some rain, attracted over 10,000 people and a feature of the event were unorthodox models.

Francis Plessier was a modeller of note (and I believe one of the event organisers), who designed off the wall models. In 1975 his flying saucer caused much amusement, as did his previous Snoopy Dog House and Wheelbarrow. But in 1976 he exceeded all expectations with his Flying Flat Iron at 12

times full size. That's approximately seven feet long and four foot wide! Of simple construction from 1.5" polystyrene sheet, it was covered in brown paper stuck on with water thinned PVA or sprayed contact cement. With no profiling of the leading edges the model was stiffened with some sheet balsa ribs, as shown on the plan. A simple motor pod was constructed and a Merco 61 hung off the front to get it airborne. Two elevons, rudder and throttle were employed to steer this behemoth around the sky. Finished weight was 8 lbs, with 7 ounces of lead in the nose to get the C of G somewhere near right.

However, there was a problem. Servos in 1976 didn't have the grunt of modern



The YS (Yamada) pressurised fuel system was a Rolls Royce, top notch solution. But the TK pressure regulator gave noticeable improvements at a budget price.

ones and they couldn't lift the massive ailerons. A touch of French ingenuity was applied and springs were added to assist. It flew far better than expected and even with the relatively low powered Merco it was rather fast and behaved like a trainer - a very big trainer! The glide wasn't great and you could almost parachute it in at a high angle of attack to land the beast. (Actually, should you use the runway or a giant ironing board?)

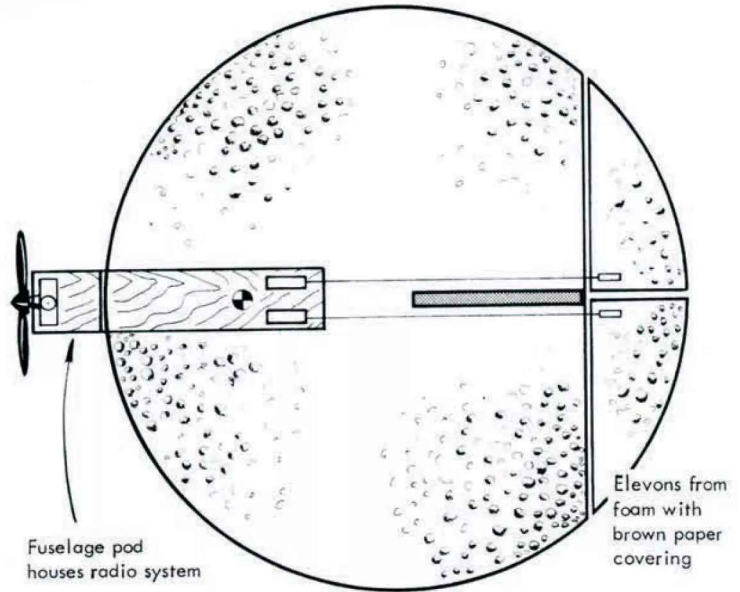
I remember reading that the only problem Francis had with the model was that he hadn't broken it at the show and so it took up a lot of storage space in his garage!

The Garrity wheels have started turning again and as we are having an unorthodox slot at this year's Pontefract Single Channel & Retro Fly In, I might just have to make one. But I'll use an electric 6S set up and some very hefty servos for the elevons. Alternatively, I could make the elevons as hollow boxes from 6 mm Depron sheet to lose some weight at the rear. I'll also need to figure out a way to make the model break down into smaller pieces for transport and storage.

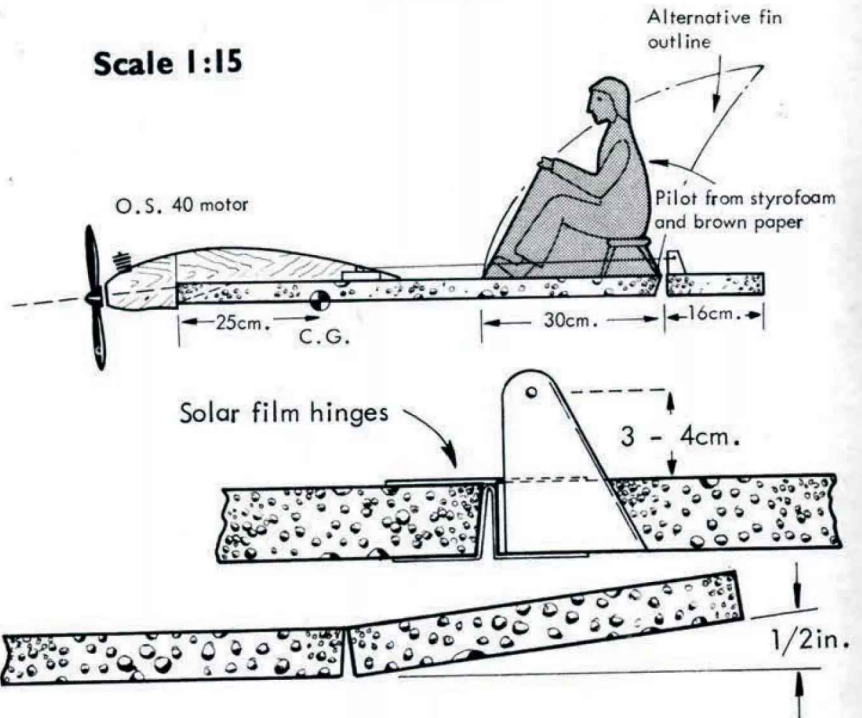
PERFORMANCE CRAZY

Back in the 1970s we all went a little performance crazy, especially in precision aerobatics and helicopters, wanting reliable engine runs with good throttle response. YS in Japan and Pery in the USA developed replacement carburettor and pump systems to achieve this. They worked well but at a price.

However the British modelling duo, Terry Cooper and Keith Jones, came up with a simpler, less expensive version called the TK Fuel Pressure System. It didn't need a replacement carburettor and the only modification to the engine was to add a pressure nipple on the crankcase in the correct location. You had to remember to open the tank vent after flight to stop the engine flooding as the fuel tank would still be pressurised. Once installed and set up correctly these systems were essentially a fit and forget solution.



Scale 1:15



Francis designed this Flying Saucer for the previous year's Stork's fly-in.



KEEP WITHIN THE LAW!

To meet pending legislation your engine-powered FF or control line model must not exceed a noise level of 82 dB(A) measured at a distance of 7 metres

THE ONLY WAY

to check if you are legal is to use a PROPERLY CALIBRATED Sound Level Meter.

use a

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SOUND LEVEL METER

AVAILABLE AT ALL GOOD MODEL SHOPS



Omni-directional dynamic microphone and precision circuitry gives accurate readings over a full 60 to 110 dB(A) range to International Standards for 'Survey' meters. Powered by single PP3 battery. FAST or SLOW response. Compact size (140 x 60 x 57mm) and REALLY INEXPENSIVE for a meter of this type and class! Specially made for modellers!

£26.95

As engines became more powerful noise was becoming an issue at model flying sites, even back in the 1970s. This Reftec Sound Meter helped pilots gauge just how irritating their aircraft were.

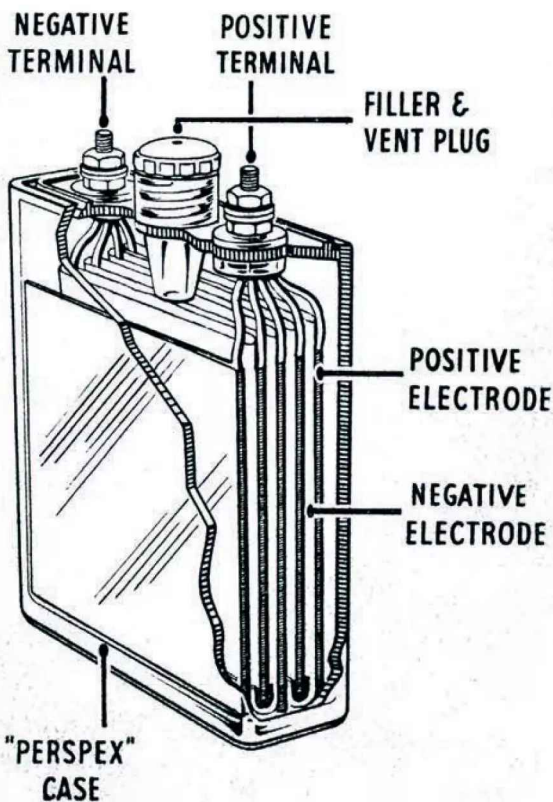
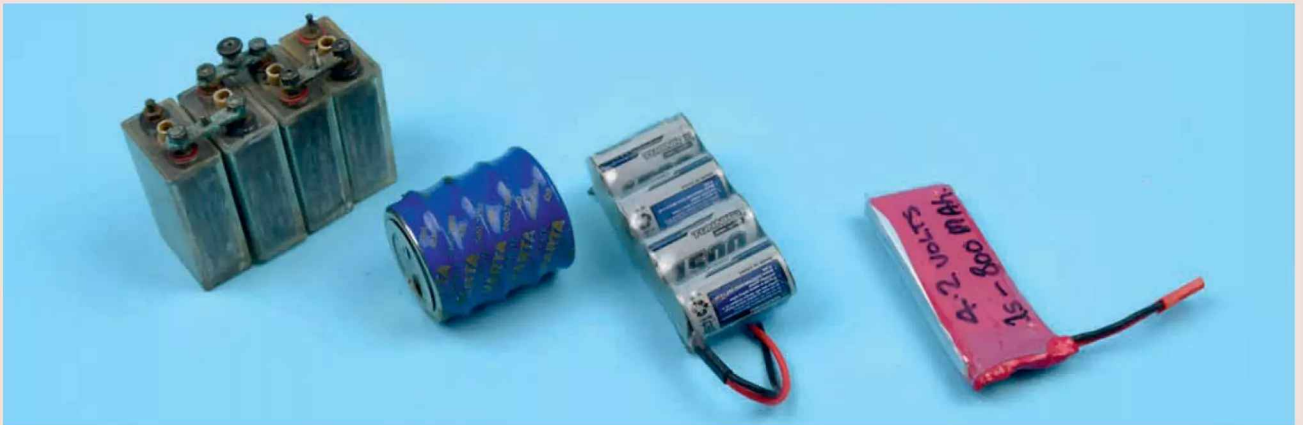
BATTERY TECH

Digging through some old modelling mags, I came across an article on Silver Zinc rechargeable cells. Their construction is shown in the drawing below. For the well-heeled, you could use them to power your R/C gear at a hefty price. Each battery was 1.5 volt and varied in current capacity depending on the physical size. Topped up with distilled

water they were very similar to a lead acid accumulator. The first practical design was attributed to Mr. Henri Andre of Paris in the early 1940s.

Still popular in the 1970s, DEACs, as shown in the Micron RC period advert (below right) were sold for use in transmitters and airborne packs.

Finally, the photograph shows how batteries have progressed. From the left: Silver Zinc (Venner, Yardney and Matsushita manufactured them). Next were DEACs in the late 1940s, then Ni-MH in the late 1980s, to LiPo in the 1990s. Interestingly, Li-Ion cells were commercialised by Sony in 1991 and their main use was in mobile phones.



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If you are unaware, the benefits of a pressurised fuel system are that the engine will not lean out or run rich when climbing, diving or in an aerobatic manoeuvre. It also allows the tank to be positioned essentially anywhere in the model and since the fuel is

fed under pressure you can use a carburettor with a larger choke area to maximise the power output of the engine.

So, by divesting yourself of a chunk of your hard-earned modelling tokens you had a win-win result. But unfortunately, this still

didn't stop you terminating your pride and joy if dumb thumbs decided to put in an appearance!

That's it for this Ramblings. As always please send your questions, stories and photographs to aeromodeller@gmail.com ■

Which filament? There's a lot to choose from!



FILAMENT CHOICES

With 3D printing becoming an increasingly popular way to make model aircraft, **Kev Scott** looks at the wide range of materials available for the task

Words: **Kev Scott**

Photos: **Kev Scott, Planeprint, Eclipsion-airplanes**

If you 3D printed a plane a number of years ago, you would likely have made it from foaming light weight PLA (LW-PLA) and carbon fibre rods, with the odd bit of TPU for the wheels and hinges. You might also have made the odd part from regular PLA.

If you considered yourself a real man, you might have said, "Wing loading, pah!" and built the whole thing from regular PLA. I certainly did that with my first 3D printed plane, the Eclipsion Go Wolf. The only problem is it is difficult to maintain that real man image when there are tears running down your face due to its inevitable end - see the nearby picture. (It was easily repaired, though.) This is one of the problems with PLA; it can be quite brittle.

HEAVIER MATERIALS

However, moving forward to the current day, there are a lot more materials available now than you might have had in 'the good old days' and they will be covered here. If you have a 3D printer, you are probably not using it exclusively for printing planes. But if you are, I take my hat off to your dedication to the hobby! In my case

though 'external influences' have me printing things like baby monitor holders, gutter pipe size reducers etc. I only mention this because some of the materials we will mention are on the heavier side and wouldn't necessarily be a good choice for a plane but should be a consideration for general printing.

PLA ALTERNATIVES

Here are some of the modern alternatives to regular PLA:

PLA+

Regular PLA is no longer the best material for building parts of planes, with the replacement now being PLA+. (There are other names for it as well, like Tough PLA and PolyMax PLA). PLA+ is largely made of PLA but with additives in it to improve its properties. The sort of improvements we are talking about are in its tensile strength (how hard you can pull it) which can be 25% more. But the really important one is in its impact strength. This is evaluated using the IZOD test.

Imagine you go to see your doctor and he/she decides to test your knee reflex; they do

this by tapping it with a hammer. Continuing this analogy, imagine your doc doesn't really like you and decides he is going to keep doing that test but each time he hits your knee he raises the hammer a bit higher. That is the essence of an IZOD test: a strip of PLA keeps getting hit with increasing intensity until it breaks. By converting potential energy to kinetic energy, the strength can be determined. The big advantage of PLA+ is that it typically has 70% greater impact strength than PLA and there is really no good reason not to use it because that is the key feature we are looking for in a 3D printed plane. It needs to be printed at a slightly higher temperature but other than that all of your PLA settings should still work.

HT-PLA & HT-PLA-GF

PLA will start to soften around 60 degrees C, so it could become a problem if left in a hot car, although this tends to be more an issue with the LW-PLA due to the typical thinness with which it is printed. Nevertheless, high temperature PLA is available that will support



Ouch! It will buff out, no problem.

temperatures greater than 100 degrees C. There is also a variant of this with glass fibre particles incorporated as well, which strengthens the print further under load but you will need a hardened nozzle for printing this.

PETG

Polyethylene Terephthalate Glycol is another readily available alternative. It is slightly heavier than PLA but offers some advantages in that it is much less brittle and will tolerate a higher temperature before starting to deform. So, it might be a better choice for a motor mount, for example. ABS is even better in this regard but has its own issues that we will cover

shortly. PETG largely prints in a similar way to PLA, but you will need to typically turn down your cooling fan speed and it can stick to the print bed a bit too enthusiastically and the use of a glue stick is recommended.

PBT

Polybutylene Terephthalate is a relatively new addition to the filament market and is a bit more durable than PETG. It is quite expensive and not widely available at the moment. It too needs a hardened nozzle.

ABS

Acrylonitrile Butadiene Styrene is recommended by Eclipson for, as an example, your motor mount if the motor temperature is going to exceed 50 degrees C, with its melting point being greater than 100 degrees C. However, ABS comes with a number of challenges; it really should be printed in a 3D printer with an enclosure (like the Bambu Lab P1S) as it is very prone to warping and the fan speed will need to be managed as well. Using some of the newer materials listed in this section might be an easier choice.

ASA

Acrylonitrile Styrene Acrylate is considered the 'thinking man's' alternative to ABS and is especially suitable for outdoor use. It is even more of a challenge to print than ABS though!

Nylon

Also known as Polyamide. Very tough and extremely durable. However, it's very prone to absorbing moisture so needs to be kept in airtight storage and like ABS it can be prone to warping.


FOAMING LW-PLA ALTERNATIVES

Just a reminder of how the LW-PLA that we all know and love is formed. It arrives at the nozzle still solid and is subject to a higher temperature than filament would normally experience and so it starts to foam in the nozzle. (Why am I feeling the urge for a Guinness at this point?) The foaming results in the very lightweight prints that we all love. There is a little bit of an art form to it as well, with test cubes usually having to be printed to calibrate the best temperature for your printer and filament choice. Once that is dialled in, however, your prints are usually very effective. See the image overleaf of my Planeprint Paper Plane, which was made with foaming LW-PLA.

LW-PLA-HT

LW-PLA suffers from the same softening problem as PLA if it is left in a hot car. LW-PLA-HT is another new material that will survive up to 100 degrees C (an example is colorFabb's LW-LA-HT). It doesn't foam quite as much as LW-PLA though, so your printed wing will potentially be a little bit heavier.

Pre-foamed PLA

However, if you don't want the fuss of foaming LW-PLA at all, have a look at pre-foamed PLA. An example of this is Polymaker Polylite. As the title says, the hard work has been done already and you just print it like regular PLA, without any of the fuss. It gives a significant reduction in weight over PLA; suppliers quote up to a 50% reduction, although I found it was more like 30-35% with my usage. Nevertheless, it's a significant and worthwhile reduction and it has a lovely matt finish. The main downside 



Planeprint Evo fitted with an undercarriage.



Planeprint Sorato in its natural environment.

is the cost, so expect to pay a bit more - but remember it goes further.

TPU ALTERNATIVES

TPU has been used to make tyres and hinges on 3D printed planes for a long time and the main thing you need to get your head around is the shore rating, which has nothing at all to do with Tripadvisor's 2025 top beaches. Instead, it talks about the hardness of the material. Typically, you will be using 95A which is easily obtained and all 3D printers with a direct drive will be able to cope with it. You might be able to get down to 85A from most retailers.

PEBA

Polyether Block Amide is a nylon-elastomer copolymer that gives a massive energy return (think hard bouncing ball) and is 15% lighter than TPU for the same hardness. It also is very stretchable and snaps right back into shape.



Author's Paper Plane. Another design from planeprint.com.



Eclipson Model X, a UAV platform.



Eclipson's Go1 Wolf. It's a free to download design!



Planeprint Evo, now with floats.

Given the high energy return it might not be best for tyres but is certainly another option to consider. Then again, if you are thinking of a bouncing bomb for your Lancaster, you are all set! It is more expensive than TPU though.

Flex TPU Air

This is the LW-PLA of the TPU world and it foams in the print nozzle in a similar way (ahh, Guinness again!). By using this technique, you can get a hardness of between 65A (tyre tread like) and 82A (leather belt like). If you are looking to print large, spongy type tyres this is the one to go for.

Be aware though that this will push the limit of your printer. I have a Bambu A1 and the Bambu Lab recommendation is that anything down to 80A is fine but below that may be a problem. That is presumably down to the ability of the direct drive to push and pull the filament so this particular filament is not subject to those normal rules and it will be quite hard until it starts foaming in the nozzle.

TPC

Thermoplastic Copolyester is more heat resistant than TPU but with that comes the need to print it at higher temperatures too. Due to the higher temperature requirements, it is best printed in an enclosure.

PP

Polypropylene is in this category because it is one of the lighter filaments and you will get

a nice smooth finish with it. It is very prone to warping though and is very difficult to get it to stick to the print bed, which you will need to cover with packing tape.

TO THE FORUM

If you want to explore any of these materials further, I have placed an article in the 3D

printed section of the RCM&E forum with lot of links to further information: <https://forums.modelflying.co.uk>

Finally, we'd like to give a big thank you to Eclipson-airplanes.com for permission to use their images of the Go1 Wolf V2 and MODEL X. Likewise, thank you to planeprint.com for use of their images of the EVO and SORATO. ■



All the parts for a Planeprint Evo.

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12A



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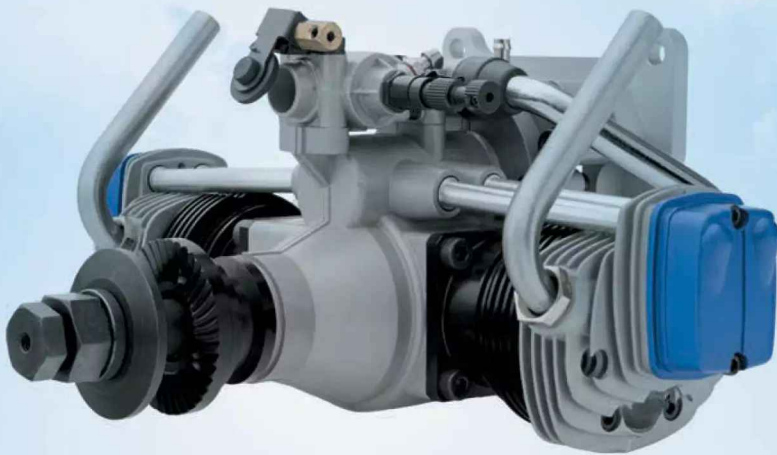
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Andy Meade flies his large scale Fouga Magister past the low-level moon viewed from the top of The Great Orme in November.



THE PSSA 40 GLORIOUS YEARS

Phil Cooke celebrates a milestone birthday for the Power Scale Soaring Association

Words & Photos: **Phil Cooke**

The Power Scale Soaring Association turns 40 years old in 2026 and our UK based group of modellers are as vibrant and active as ever! This article provides an overview of 2025's highlights and explains what's in store for our 40th anniversary year.

A LITTLE BIT OF HISTORY

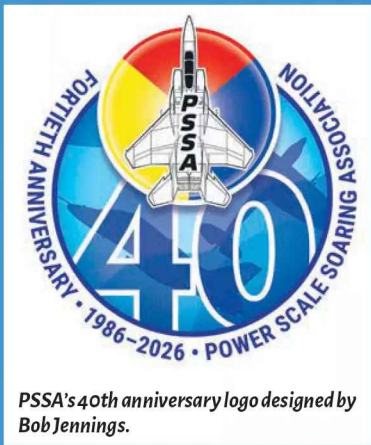
Learning to fly with my dad back in the 1980s, I vividly recall my very first encounter with a Power Scale Soaring model and the huge impact that

it had on the following 39 years of my modelling journey. At the time we were regular flyers at Bosley Cloud near Congleton, cutting our teeth on a Phase 6, learning slope aerobatics and energy management with gliders. A chance encounter with local flyer Simon Cocker introduced us to the concept of PSS whilst he was flying his own designed F-20 Tigershark. I well recall how this model injected a huge dose of scale realism and jet-style 'cool'. Dad and I were immediately hooked and with a little guidance we started our own PSS journey, jointly building a BAe Hawk

from the original Andy Conway plans. The year was 1987, the Power Scale Soaring Association had just recently been formed bringing like-minded slope flyers together and we would soon become active members.

A PRE-SEASON RENDEZVOUS

Last year the PSSA commenced their group activities with a visit to The Harrier Heritage Centre at RAF Wittering, Cambridgeshire. Following an excellent pictorial lecture covering the base's history, PSSA members



PSSA's 40th anniversary logo designed by Bob Jennings.



Bob Jennings with his superb Avro Shackleton MR2 developed from the G&M Models Lancaster plans.

were able to explore a number of rooms packed to the rafters with Harrier and RAF Wittering memorabilia before heading into the hangar with four complete Harrier airframes of different marks on display, from the original GR1 to the GR7A. An excellent few hours of informative discussion culminated in a rather special group photo with our models portraying RAF types throughout the years.

THE ORME BECKONS

Flying commenced soon after at The Great Orme on 12th - 13th April where there were a number of new models on show. As usual for our opening event of the year, attendance was high.

Bob Jennings introduced us to his new Avro Shackleton, derived from the G&M Models Lancaster plans previously published in RCM&E. The Shackleton brings a new dimension to the plan with increased span and added scale details. To my knowledge it is the first known model of the type built for the slope.

Andy Meade successfully flew his NA XB-70 Valkyrie to good effect, another highly unusual subject. It's actually an older model originally designed and built by Chris Collis which Andy only rarely flies. It certainly draws attention when it's airborne with its sleek delta shape.



PSSA members proudly display their models of well-known RAF types in front of a Harrier GR7A at the superb Harrier Heritage Centre, RAF Wittering.



Andy Meade's impressive NA XB-70 Valkyrie in flight at the Great Orme. Originally designed and built by Chris Collis.

Having test flown my new larger Jet Provost T.4 at New Year in high winds, April saw the model's second outing and it revelled in the ideal conditions on the Sunday. There are a number of 150% scale JPs on the PSS circuit now, modified from the original Andy Blackburn plans, and they all fly superbly, with more refinement, more

energy and more presence than its popular, smaller predecessor.

May saw us return to the Orme, this time with a themed event around the 80th Anniversary of VE Day. Despite a calm forecast with light north westerly winds, a group of flyers gathered with their examples of WW2 types associated with the European theatre.

Although little PSS flying was achieved on the Saturday, highlights of the models on show included Andy Meade's WW2 jet duo with his Messerschmitt Me 262 and Gloster Meteor F3. The two models vary significantly despite their common history. The Airworld Me 262 is a fully moulded kit, originally for turbine use, whereas the Meteor is a traditionally constructed, own design model using balsa and ply, spanning 73" and weighing in at around 10 lbs. Both are superb flyers when conditions allow.

On the Sunday the winds moved northerly and built sufficiently in strength to fly some of the lighter loaded PSS models.

PSS EXTRAVAGANZA!

Between 28th June and 6th July 2025, the Association enjoyed a 'Festival of PSS' as guest flyers of the Lley Model Aero Club, with nine consecutive days upon the picturesque coastal slopes of the Lley Peninsula. With such a large flying window we experienced a huge array of conditions, leading to a wealth of varied flying being achieved across the full spectrum of PSS scales and weights.

Highlights for me included Jeff Mortimer who flew his new Bristol Beaufighter, built from the Tony Nijhuis short kit and test flown for the first time at this event. At 1:10 scale this impressive 70-inch span model performed very well in ideal conditions and looked superb soaring along the Cilan coastline.



Jet Provost flown by Phil Cooke low and fast on an overshoot through the LZ prior to landing.



VE Day's 80th anniversary was marked by PSSA members at The Great Orme in May. Sadly, low winds stopped us flying in those glorious skies!



WW2 jet duo. Andy Meade with his Me 262 built from the Airworld kit and his O/D plan-built Gloster Meteor Mk.4.



Jeff Mortimer with his lovely Bristol Beaufighter Mk.1C seen just prior to its successful maiden flight at the Lleyn in June. 70-inch span, built for PSS from the Tony Nijhuis power model plan.



Harry Twist provides a textbook launch for Jeff Mortimer's Beaufighter from the Cilan headland.



Bob Jennings with his impressive F-4 Phantom and the deHavilland Vampire in Swiss Air Force target-tug markings.



Cessna Citation Bravo flown by Andy Meade and providing colour and contrast at the Lleyn event.

Bob Jennings' F-4 Phantom was seen going great guns and looked superb in its black and yellow 111(F) Sqn. colours. This 48" span F-4 is converted from an old power kit bought second hand and finished with Bob's usual artistic flair!

After a few years away it was great to see Rez Manzoori back flying with the PSSA. His well proven BAe Hawk T1 was flying as well as ever. Jason Absalom was also flying a new Hawk, built from the RBC EDF kit and converted to PSS. Finished in the colours of the Red Arrows, it looked most impressive both on the ground and in the air.

Andy Meade was seen enjoying his Cessna Citation Bravo, a large model originally built for PSS by Dave Gilder. With its all yellow TCS Ambulance scheme it really stood out against the vivid greens, browns and blues of our surroundings.

I had a few flights with my F-86 Sabre. It's so enjoyable flying on these bigger hills, allowing huge jet like aerobatics with plenty of open space for dropping the wing tanks before landing back into the LZ.

This really was a fantastic week's flying and the Association would like to extend its gratitude to the Lleyn MAC for enabling our dedicated time on the slopes.

A SOUTH WALES ADVENTURE

In August the PSSA travelled to the inland Bwlch slopes near Treorchy, South Wales and enjoyed two days of flying at this world-renowned site. Easterly winds dictated the use of 'The Crest' slope, a superb location for huge, smooth lift but one which suffers from rotor in the landing zone, as well as seeing us incur a 15-minute hike from the cars. Ten PSSA members were present over the weekend and some great flying was achieved in a relaxed setting, our relatively low numbers meaning you could fly freely as and when you wished.

Martin Gay ably demonstrated the latest offering from G&M Models with the Lockheed U-2, a built-up model at a



Rez Manzoori enjoyed flying his flamboyantly painted BAe Hawk T1A, captured here in the circuit.



Fouga Magister from the Island Models PSS kit, built and flown by Bob Jennings. A superb all-round model beautifully finished in a French air force 'Tiger' scheme.



Bob Jennings' enjoyed some great airtime at The Bwlch with his NA F-86 Sabre in Hellenic air force colours.



Martin Gay with the new G&M Models Lockheed U-2, a practically sized fully built-up version of the famous type. We think this will be a popular model!



Jason Absalom with his BAe Hawk T1A built for PSS from the RBCEDF kit.



Phil Stone test flew his lovely new Me109 in September. Built for PSS from the old GWS foam electric kit.



Phil Cooke enjoyed flying his NA F-86 Sabre in Yugoslavian display team colours on the Lleyn slopes. With no wheels on PSS models, it's important to drop your stores before belly landing!



James Archer with his superb Avro Vulcan 3D printed from the online files by DJ Designs. A great little flier!

practical scale and proving very efficient from the slope, typical of this aircraft type. Bob Jennings enjoyed some impressive flights with his 'Tiger' Magister built from the Island Models kit and his lesser flown F-86 Sabre finished in a groovy Greek Air Force 'Hellenic Flame' scheme, complete with drop tanks!

ROUNDING OFF WHERE WE STARTED

Our Orme meets in both September and October were partially curtailed by the UK weather. But in the true spirit of the Association the show continued as best we could. September saw a planned day's flying cancelled due to persistent rain on the Saturday, leaving the Sunday to fly out above the lighthouse on a mid-strength NNW wind. This particular site is challenging for landings due to rocks and this often dictates the types of models flown, with folks holding back their bigger, more precious planes for safer operating environments. Smaller, well tried and tested models were the way to go, although Phil Stone did successfully test fly his new Me 109 built to his usual meticulous level of detail from the old GWS electric kit. James Archer also test flew his new Avro Vulcan of 950 mm span, which he had 3D printed commercially from the DJ Designs files available online at www.Cults3D.com and then assembled at home. The model was finished in a very realistic RAF scheme to represent the famous 'Black Buck' Vulcan XM607. Both models performed very well in the relatively light lift.

In October easterly winds once again saw us flying on the Orme's pier slope in very murky



PSSA members pause from flying at the challenging NNW facing Great Orme slopes in September.



Dave Gilder with his impressive EPP Alpha Jet built from the Combat Air Models kit and successfully test flown in October.



NA F-100 Super Sabre built and flown by Andy Meade. Model handled superbly following a little careful balancing.



Tim Mackey's Supermarine Spitfire PR.XI is launched from the rocky SW face of the Orme during a superb flying session in November.



Harvard Mass Build event logo designed by Bob Jennings.

and often damp conditions. The turnout was surprisingly good considering the weather, with 20 plus pilots joining us to fly over the two days. Dave Gilder's new Dornier Alpha Jet was worthy of note, test flown at this event and just completed from the Combat Air Models kit. This all EPP jet, spanning 58", had good presence in the air and put on a very jet like performance.

ADHOC GATHERING

Following the curtailed, damp nature of the final events of the planned 2025 season it was good to see a number of PSSA members eager to regroup for a day's flying on a date dictated solely by the weather. The forecasts all came good on a date in November for an ad-hoc session at The Orme, designed to see the season out in style! Ten modellers made the short day trip and with booming lift and sunny skies on the most favoured SW slope there were some memorable flights.

Andy Meade flew his recently acquired Fouga Magister of 1:4.5 scale, originally designed and built by Dirk Tinck – see picture at start of this article. Andy enjoyed a number

of successful flights with the Magister in stunning conditions and it will be good to see more of this impressive model flying in the UK under Andy's ownership.

Local flyer Tim Mackey with his Spitfire PR.XI finished in Photo Reconnaissance Blue, a well campaigned model successfully converted to PSS from the Jamara power kit.

Many other larger, heavier models were active throughout this excellent day of flying but I'll conclude with a mention of the Andy Meade built F-100 Super Sabre which was flown to great effect during this session. The model was transformed with a little refined balancing and quickly became a firm favourite, the bespoke Super Sabre looking great in the sunlight for the camera.

PSSA EVENTS FOR 2026

I hope this overview of the 2025 season demonstrates how active and passionate a group of modellers the PSSA are. I think it's fair to say we are looking very good for 40!

2026 is set to be equally busy and with our 40th Anniversary ahead, alongside the usual

series of PSS Fly-Ins between April and October, we are planning to run a Mass Build event which will act as our showcase celebration meeting. The event will run from 19th - 20th September 2026 at The Great Orme, Llandudno.

For this year's Mass Build, we've chosen the Harvard as our subject, with PSS conversions being made from the RBC electric power kit. We selected the Harvard not only because of the type's wide choice of colour schemes but also due to its links to our Association's founder, the much-missed Alan Hulme, who learnt to fly at the end of WW2 in the Harvard during RAF training in Canada. This will act as a poignant tribute to the man who helped bring us all together as a like-minded sloping community way back in 1986. Building has already commenced and there are a large number of kits now being assembled, with many builders with active build blogs running on the RCM&E modelflying.co.uk forum. Why not check them out online and if you are keen to see the collection of Harvards being displayed in person then do please come and join us in September and help celebrate the 40th Anniversary of the Power Scale Soaring Association. ■



JETPOWER 2025

Thorsten Häs continues his report from Europe's largest international air show and trade fair for jet and turbine model building

Words: **Thorsten Häs**

Photos: **Thorsten Häs, Fynn Häs**



1 & 2: Horizon Hobby - www.horizonhobby.com

Horizon presented a brand-new airliner, the E-flite Airbus A320neo of 1.52 m wingspan, 1.58 m length, with twin 64 mm EDFs and LED navigation lights, functional flaps and retractable landing gear. The Airbus is available as PNP and BNF. Another focus was the Hangar 9 Jet Hawk T-45 ARF.





PART 2

4



3 & 4: KingTech / JMB Jets SARL - www.kingtechturbine.lu

This stand showcased many turbine and turboprop variants and their use in a wide variety of models. New additions included the Evolution 3D sports jet with a wingspan of 1.9 m for turbines from 100N to 180N, the MB-339 of 2.19 span and the Fouga Magister with a wingspan of 3.6 m (recommended power from 2 x 86N).

5



5: Lambert Microantriebe - www.lambert-modellturbinen.de

This company is known for its micro turbines with thrust starting at 19N. It presented its new

T250 model with 250N thrust. Work is currently underway on a version with up to 400N thrust, which is expected to be available in 2026. Another new addition is the T55 (55N). ✈️

3



6: Laurents Concept - www.laurensconcept.fr

The two Mirages on display in 1:4 scale were eye-catchers from this French manufacturer.

7: MiboJets - www.mibojets.com

Mibo's new X35 was presented as a 'scale looking sport jet' with a wingspan of 1.75 m and length of 2.65 m. With a take-off weight of 19 kg and a JetCat 250 ProS V2 the prototype had additional vector control. The model is available as a kit, ARF painted as desired and as PNP.

8: Trim RC - www.nsmodelers.rs

The Serbian wooden kit specialist presented the F-104 in 1:4 scale at 1.63 and 1.89 m wingspans, 4.15 m length and approx. 25 kg



for turbines from 100 - 250N. The F-104 is also available in 1:5, 3 scale. The Acrobat-Jet NEXT is available in sizes 2.75, 2.5, 2.2 and 1.9. Special 3D-printed add-on parts for the company's own models are available as accessories.

9: Peter Adolfs Flugmodelle - www.paf-shop.de

Known for its wide selection of small parts and accessories, Peter's is a little shopping oasis at trade fairs for model builders. In addition to accessories, Peter also offers a wide variety of models including a new Me163 Komet at 1:6 scale, 1.55 m wingspan for EDF, turbine or as a PSS glider.

JET POWER HIGHLIGHT #1



Airbus A380-800

The Airbus A380-800 is one of the largest and most impressive aircraft of our time, for which Ramy Farhat presented a 1:21 scale model. The take-off weight of approx. 35 kg is powered by four 120 electric ducted fans with Hacker motors and a 12S set of batteries. Other components include the Electron retractable landing gear, Cortex Pro Gyro and Jeti R/C system. The model has a wingspan of 3.9 m and a length of 3.6 m.





10: Perma-Grit – www.permagrit.com
 Ian Richardson's tools are found in many model-making workshops. Ian displayed and sold a wide range of tools and accessories at his stand at JetPower.

11 & 12: Pilot RC – www.pilot-rc.com
 Pilot RC presented the slightly smaller version of the Su-30MMK from Elsterjet with a length

of 2.8 m, dry weight of 15.5 kg and using their familiar construction in honeycomb and carbon fibre.

13: PowerBox Systems GmbH – www.powerbox-systems.com
 PowerBox provided information about the new update for CORE transmitters (version 3.8), which enables Bluetooth connection to

head-up display glasses (e.g. Engo 2) without additional hardware. The new GPS-V sensor for common telemetry protocols and the PowerBox iServo HVC.45 were also discussed.

14: RC Helicopter-Service – www.rchicopterservice.de

These large Bell 206 JetRanger III helicopters are impressive, even when stationary, but even more so in flight! Scale 1:3.3, fuselage length 2.03 m and main rotor diameter 3.14 m, weighing approx. 24.8 kg. Heiko Fischer and his team presented the BO-105 'CB' at the stand, which is available both as a kit and as an RTF version. The kit consists of a 12-piece GRP parts set. In addition, milled



frame sets and precisely fitting scale parts are available. The BO-105 has a rotor diameter of 1.9 m, a take-off weight of approx. 14 kg, and is electric powered. The model is characterised by its agility and is suitable for aerobatics.

15: S&K RC Scale Models - www.sk-rcscale.com

The model manufacturer from Poland presented its newly developed SportJet 'STYX' at 2.4 m wingspan, 2.4 m length, approx. 18 kg and for turbines of 140-180N. It is expected to be available in the second quarter of 2026.

16: Scale Jets - www.scale-jets.com

Dutch manufacturer Marijn Penninx showcased the F-16 in 1:5 scale with 2.02 m wingspan, 2.91 m length, for turbines from 16 kg thrust, as well as its F-15C in 1:6 scale, 2.2 m wingspan, 3.2 m length, from 2 x 12 kg thrust.

17: Scale Print GmbH - www.scale-print.de

Stefan Radau has over 3,000 different scale accessories, with a huge selection of exterior and interior components and cockpit parts. Over 100 different models (helicopters, jets, motorised aircraft, etc.) are available for you to choose the right parts.



18: SebArt - www.sebart-shop.com

In collaboration with Freewing and Sebastiano Silvestri, the vector-controlled ARES 3D (1.16 m wingspan, 1.4 m length) was shown and available in 6S and 8S Performance versions using a 90 mm EDF. Well known examples from their range were also presented.

19: SMT-RC - www.smt-rc.com & www.luukstruik.nl

Dutch model retailer Ray Struik supplies scale accessories, connectors, displays and electronics. Luuk Struik presented his own model, the Stingray, a 2 m wingspan glider for FES, EDF or turbine which is constructed



JET POWER HIGHLIGHT #2



Red Bull Aerobatic Team

This pair of Airworld Aermacchi MB 339 jets in Red Bull liveries were flown by Robert and Sebastian Fuchs. The models are built to a scale of 1:2.4, giving them a wingspan of 4.2 m and a length of 4.5 m. They are powered by two JetCat P400 engines and equipped with R/C from Powerbox and Spektrum, as well as all-round lighting from Unilight.



from carbon/Kevlar. The nose of the fuselage is made of Kevlar to ensure good reception. The model will be available from early 2026.

20: Smoke-Systems - www.smoke-el.de

Gunter Zielke presented a new Version 5 of his fuel station featuring SmartFill mode. Specially developed for bag tanks, the refuelling process has four automatic phases: start, venting, filling and pressure reduction. It does not matter whether the tank is still partially full or completely empty. Familiar versions of the previous station are still available. The El-Fuel pump is now also available and supplies the engine with constant fuel pressure, ensuring optimum engine performance in all flight conditions. The pump has an adjustable pressure of 60 - 200 mBAR and provides the current pressure, voltage and temperature via telemetry.

21: Sorvolando Compositi - www.sorvolandocompositi.it

From Italy, offering model making products in addition to the Jet F-84F Thunderstreak which is available in 1:5 scale with a wingspan of 2.05 m and a take-off weight of 15 - 16.5 kg. An optional light version can achieve a take-off weight of 13.5 kg.

22 & 23: Swiss Model Shop - www.swissmodelshop.ch

This shop presented the Starfighter F-104 in 1:3 scale from Airworld (wingspan 2.5 m, length 5.78 m, weight approx. 65 kg) in the display slots. The Starfighter was powered by 2 x JetCat P300 turbines and equipped with a Jeti RC system and Cortex Gyro, as well as lighting from unilight.at. The Starfighter is truly phenomenal in flight.



24: Tomahawk Aviation - <https://tomahawk-aviation.com>

The PNP version of the Tomahawk F16 (1:4 scale, 2.37 m wingspan, 3.8 m length and a weight of 39 kg) can be ordered with desired specifications, including pneumatic scale retractable landing gear, scale cockpit, afterburner ring, smoke system, tanks, Sidewinder missiles, a lighting system, central electronics for controlling the landing gear,

flaps, brakes and lighting, as well as all servos. The Futura jets in their various versions are well-known and popular but the Futura XXL giant jet never fails to impress with a wingspan of 3.7 m, a length of 4.37 m and a take-off weight of approx. 50 kg, not only because of its size but also because of its dynamic flight manoeuvres. The Tomahawk team led by Thomas Höchstmann and Jürgen Friedel presented a large selection of models at the ✈️



stand and in the flight slots. The new ASG 32 glider was also on display, in 1:4.5 scale with a wingspan of 4.44 m, length 2 m and a take-off weight of 6.4 kg in the FES version.

25: TomJets - www.tomjets.com

The latest model from TomJets is the X130 with a wingspan of 1.4 m, length 2.5 m and a weight of approx. 9 -11 kg. Like other models from TomJets such as the Squall70, Squall120 and Interceptor, the X130 is constructed from a wooden kit. It is powered by a 12S Ejets Jetfan 130 mm or a 100N turbine. Additional accessories for the models can be purchased directly from TomJets.

26: uniLIGHT - www.unilight.at

The supplier for model lighting presented their PRO10 lights which are powerful position and navigation lights specially developed for larger sport jets, offering maximum visibility. The lights are only 10 mm thick but deliver up to 4000 lumens of strobe power. For sophisticated lighting systems that can be flexibly configured and easily



JET POWER HIGHLIGHT #3

**F-4 Phantom II**

The CARF ULTRA Scale Jet F-4 Phantom II, in a scale of 1:4.5, has a wingspan of 2.64 m. The flight characteristics are fantastic and it is inherently stable. With its delta-shaped wings in combination with the



slats and landing flaps, the model can be flown in a steep dive. The take-off weight (dry) is approx. 37 - 40 kg and the F-4 is available in short and long nose versions; as with the original, the versions differ not only in fuselage length but also in wing

thickness – they are simply 100% scale! Customer models have been in production since September 2024 and have a very high degree of prefabrication in the ARF+ kit. Nevertheless, most models are delivered as PNP, built to customer specifications.

programmed via uniLIGHT.desk, while remaining compact and powerful, the Black.1+ and Black.4+ lighting controls are available.

27 & 28: Vario Helicopter - www.vario-helicopter.biz

The sensation among helicopters was the Chinook XL in 1:7.5 scale in a turbine

version. The electric version of this tandem rotor helicopter has been available since 2024. With a rotor diameter of 2 x 2.3 m the Chinook is already very impressive, however specially developed turbine rotor heads ensure good flight characteristics. The turbine version will be available from March 2026.

COMING THIS YEAR

It has already been decided that JetPower 2026 will take place once again at the LSG Breitscheid-Haiger airfield. The date has been set for September 4th to 6th, 2026. I hope we'll see you at JetPower 2026. But if not, I look forward to reporting all the latest jet news to you again from this year's show. ■

The initial prototype had six wheels and a V-tail. But the modified four wheel and H-tail version shown on the plan proves that you should never give up on a design even if it does need a few tweaks.



SKYBUG ONE

Part 2

Continuing his Pro-Plan build from the April issue, **Lindsay Todd** makes the anhedral wing and finishes Skybug One ready for its maiden mission

Words & Photos: **Lindsay Todd**

The wing's key elements are the main and rear spars which are from 3 mm marine ply and carry the angle change to produce the pronounced anhedral. Due to this the wing is built as two separate panels and then joined around the spar once most of the internal structure is complete.

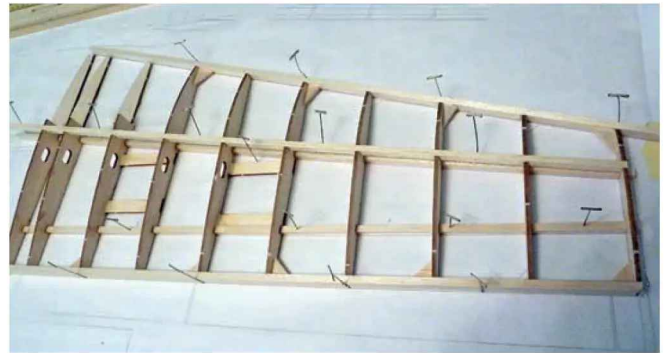
Pin down the lower 6 mm square balsa spars aligned to the centre line, position the 3 mm ply plates for servo hatch fixings and then locate ribs from tip WR11 down to WR2, leaving WR2a, WR3a and WR4a until later, and glue in place together with the ply servo plates. 6 mm balsa strip is then added to both rear and front of the panel, extending to the centre line at the rear and beyond the position of WR2a. The top 6 mm balsa spa can now be added and then triangular fillets around the rib to trailing and leading edges. Now repeat the process for the opposite wing panel.



You must admit that Skybug One has a distinctive shape. I think I actually prefer the H-tail now.



Main wing spars and servo hatch plates.



Basic wing panel construction with 6 mm balsa spars and leading edge in place.

JOINING THE WINGS

To join the panels, use the main spar first which should align to the inside face of rib WR5 and sit flush to the front of WR2, WR3 and WR4 and flush with the top and bottom surface. Glue and clamp until dry then add triangular infill to the rear of the main spar at ribs WR3, WR4 and WR5.

The rear spar can now be glued against the rear balsa spar. Mark the correct position of the end point to ensure correct alignment and leave to dry. Add triangular fillets to strengthen.

The second panel can now be fixed to the spars in the same manner. Some sanding at the centre line for the balsa trailing edge can be done as required but ensure the centreline is maintained and then clamp until dry. Now glue the 6 mm balsa brace to the inside face of the trailing edge.

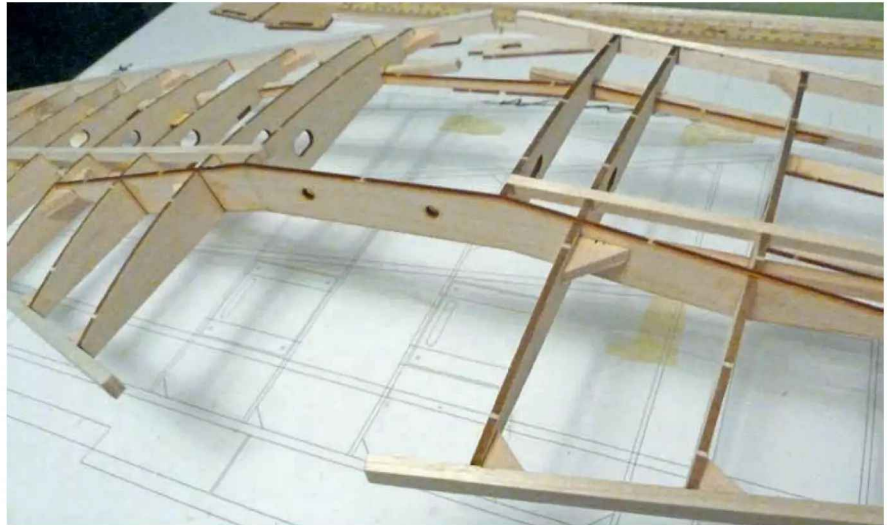
Forward ribs halves WR3a and WR4a can be add to both sides aligned with the corresponding ribs and again triangular fillets added.

Next, locate the WR2a ribs. This was done by temporary locating some 6 mm dowels into the leading edge of the spar and locating the wing onto the fuselage with some 1.5 mm sheeting acting as a spacer. The leading edges are trimmed to suit the fuselage width with an appropriate clearance. I used some 1.5 mm balsa sheet. The WR2a ribs can then be positioned and glued. When dry remove the wing and add triangular fillets to strengthen the joints.

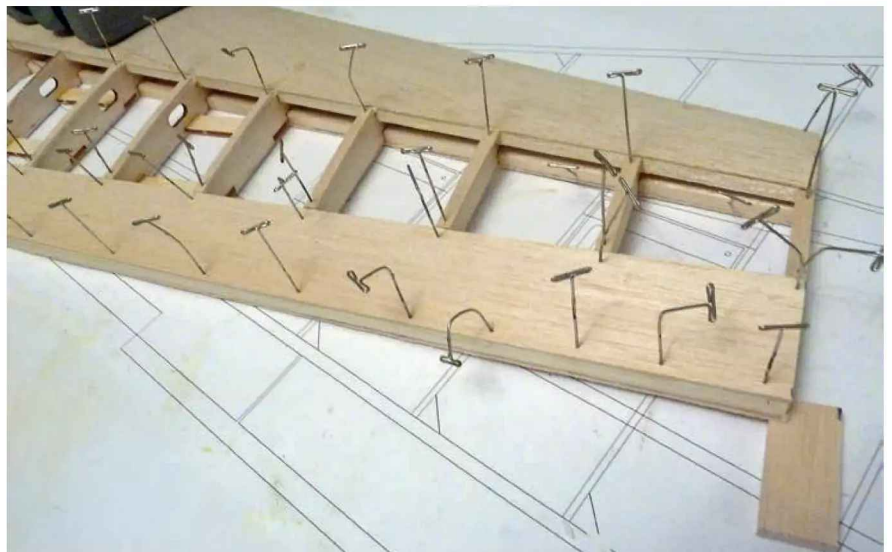
Add 6 mm infill to the top and bottom at the rear of the front spar between WR2 and add the 6 mm balsa plate for the 6 mm dowels and then fit ribs WR1 on either side and add triangular fillets to strengthen. The dowels can now be glued into the front face of the spar and locate back into holes drilled into the balsa plate. Additional 3 mm balsa strip is then glued to the inside faces of WR2 top and bottom to allow an additional glue surface for sheeting.

The wing leading and trailing edges can now be sanded flush to the ribs. 1.5 mm sheeting can be applied, starting with the top leading-edge section which extends to the rear edge of the balsa spars from WR1a out to the tips. Then add the underside leading edge sheeting and the underside centre sheeting.

Next, add the trailing edge sheeting to the underside of the wing from the front of the rear spar to the trailing edge and add the 6 mm wide caps strips between at each rib.



Joining of the wing panels to the main spars.



Wing sheeting and application of washout by the use of 6 mm scrap to raise the trailing edge.

WASHOUT

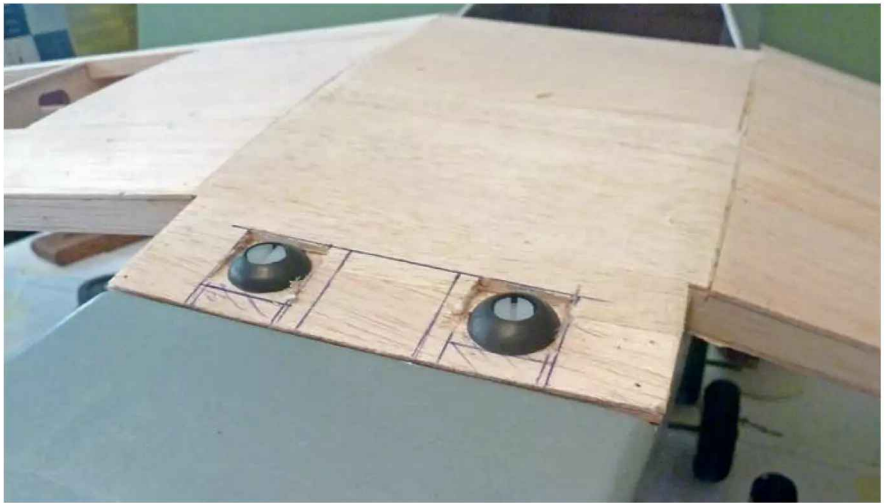
Before adding the rear top sheeting, some washout is introduced by clamping the wing outer panel flush with the building board and locating some 6 mm scrap timber under the trailing edge at the tip of the wing to induce a twist. With the block in place add the rear sheeting, followed by the centre sheeting to

the second rib and then the 6 mm wide cap strips. When dry repeat for the other side.

Add sheeting to the underside of the centre section followed by trailing edge section. When dry the top centre sheeting can be added, extending back over the stock trailing edge, so increasing its thickness by 1.5 mm which can then be sanded back as required to a flush fit. ➔



Ensuring correct fit of the wing dowels and clearance around the fuselage.



Trailing edge fitted together with the wing bolts.



A little bit of fun with a cockpit set of chairs and an instrument panel.

The trailing edge was added at each tip before adding the 6 mm balsa tips and then sanding smooth and rounding the leading edge. The ailerons are cut from trailing edge stock with the leading edges chamfered for centre hinges. Note that the angle changes in the wing will require angles to be sanded at the end faces to accommodate free movement.

For covering I used a heat shrink fabric over the open structure and then glass cloth with acrylic resin elsewhere as I was going for a painted finish.

“...washout is introduced by clamping the outer panel flush with the board and locating some 6 mm scrap timber under the TE at the tip to induce a twist”

Hitec HS85 mini servos were mounted onto plates and fixed into the corresponding pockets in the lower surface of the wing, being connected to the control horns with 2 mm wire and clevises. Extension leads pass through the wings to exit holes at the centre section.

SCI-FI SCHEME

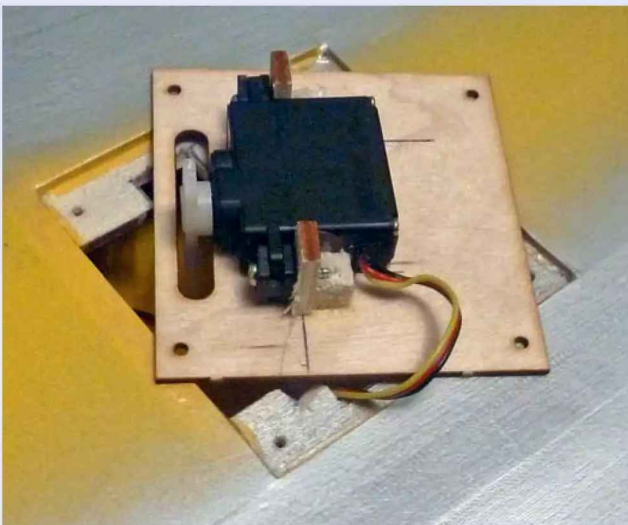
The battery is contained in a lite-ply box with hook and loop strap fixing at the rear made to suit a 3 cell 3000 mah LiPo and glued to the floor area behind the motor in the tunnel duct. The ESC was fixed with double sided sticky pads to the inside of the duct roof, giving plenty of cooling.

The cockpit glazing is 0.5 mm clear acetate cut to shape and glued and screwed in place. But don't forget to add a suitable crew. My crew were acquired for £1 at a car boot sale!

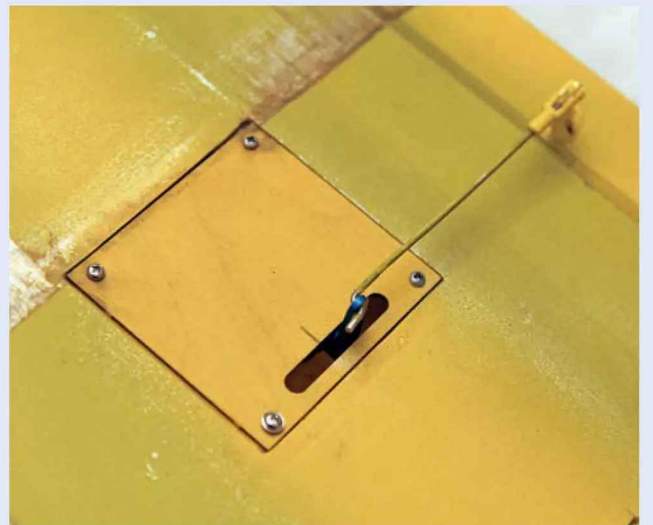
The fun bit was finishing in a pseudo sci-fi scheme. Using yellow over silver and rubbed back to create a used look was always on the agenda. I used enamel spray cans for the silver and acrylic yellow over the top, highlighted with dark browns to create panels and shadows. My Cameo vinyl cutter produced paint masks and helped create the final look which I am rather pleased with.

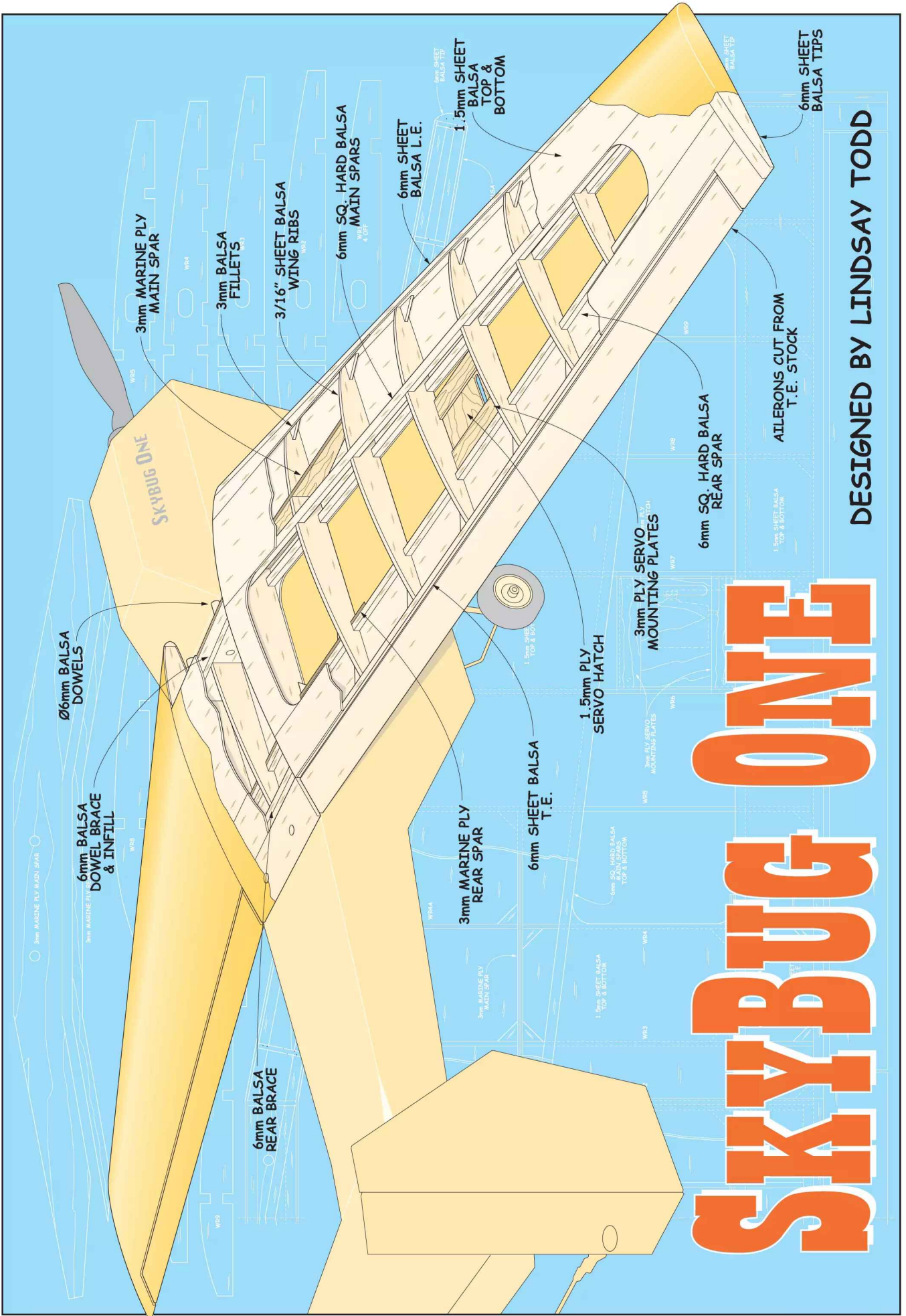
THE FLYING BIT

Initial flights were made from a tarmac runway in Skybug's six-wheel V-tail configuration. ✈



Mini servos are mounted to ply plates to operate the ailerons.





Ø6mm Balsa DOWELS

6mm Balsa DOWEL BRACE & INFILL

6mm Balsa REAR BRACE

3mm MARINE PLY MAIN SPAR

3mm Balsa FILLETS

3/16" SHEET Balsa WING RIBS

6mm SQ. HARD Balsa MAIN SPARS

6mm SHEET Balsa L.E.

1.5mm SHEET Balsa TOP & BOTTOM

6mm SHEET Balsa TIPS

3mm MARINE PLY REAR SPAR

6mm SHEET Balsa T.E.

1.5mm PLY SERVO HATCH

3mm PLY SERVO MOUNTING PLATES

6mm SQ. HARD Balsa REAR SPAR

AILERONS CUT FROM T.E. STOCK

SKYBUG ONE

DESIGNED BY LINDSAY TODD



The pilots were a lucky find at a car boot sale and cost £1 for four so there's a crew waiting for a future model too!

The flying side was fine, but ground handling was another story. The loss of our tarmac flying site then led to a near two-year hiatus and a need to develop a more accommodating format for our grass site. This resulted in the four-wheel H-tail configuration presented in the final design.

Ground handling is much like an R/C car, so no issues present themselves once

trimmed to track straight. Once flying speed is reached, Skybug will lift off cleanly and the controls offer a nice crisp response. I like my models to have a more sensitive feel and for me the balance was fine, but I would recommend some exponential if you like things a little calmer. Despite the deep fuselage the use of anhedral does increase



With the rear door open, demonstrating the cavernous cargo space inside.

“Ground handling is much like an R/C car, so no issues present themselves once trimmed to track straight”

roll sensitivity so be aware during initial flights until you get a feel for it. Slow speed handling is remarkably good and took me a little by surprise; despite the somewhat blunt frontal area the drag does not seem as extreme as you might expect. I was flying low passes and touch and goes on the first flight.

The twin fins and rudders are very effective, even at high alpha attitudes. The model will perform rolls and loops and



Awaiting a fourth test flight in the all-new H-tail configuration. Taxing now presents no issues and is like driving a model car.



Despite the blunt front end, drag is not as extreme as you might expect.



The use of anhedral increases roll sensitivity so be aware until you get a feel for it.



Skybug One should be quite comfortable to fly for the average club pilot.

DATAFILE

Name:	Skybug One
Model type:	Unorthodox (sci-fi recovery aircraft)
Designed by:	Lindsay Todd
Wingspan:	1342 mm (53 in)
Wing area:	35.5sq.dm (530 sq.in.)
Weight:	2153 g (4 lb 12 oz) inc. 3S 2600 mAh LiPo
Wing loading:	20.65 oz./sq. ft.
Functions (servos):	Aileron (2), rudder (1), elevator (1), steering (1), throttle (via ESC)
Power system:	Overlander T3548/05 (710-watt, 900 kV) brushless motor, 60A ESC, 3S 2600 mAh LiPo
Propeller:	13 x 8 APC-E

inverted flight but looks a little odd, as you might expect. I have not spun the model yet; the stall is quite benign, but you can get some funny scenarios developing with delta planform wings even though we have twin fins and rudders. So, I will leave trying a spin for a future date.

For landing, control the descent with throttle and a slight flare before touching down and you should have no issues other than the massive grin on your face that this type of model seems to give you.

SKYBUG, OVER

In summary, this is not a beginner's model. But it should be quite comfortable for the average club pilot. If you're in the mood for something a little different then this might just fit the bill.

I have had great fun developing Skybug One. The construction is pretty basic, the power system gives a good reserve of performance and it never fails to grab a bit of attention. ■

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LiPo Battery for
Spektrum
Transmitters

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PPL-25C2S-0350	25C/50C, 2S (7.4V) 350mAh	£4.50
PPL-60C2S-0450	60C/120C, 2S (7.4V) 450mAh	£4.70
PPL-60C2S-0800	60C/120C, 2S (7.4V) 800mAh	£8.50
PPL-60C2S-1000	60C/120C, 2S (7.4V) 1000mAh	£9.25
PPL-60C2S-1300	60C/120C, 2S (7.4V) 1300mAh	£11.00
PPL-40C2S-1800	40C/80C, 2S (7.4V) 1800mAh	£14.50
PPL-60C2S-2200	60C/120C, 2S (7.4V) 2200mAh	£18.25
PPL-40C2S-2600	40C/80C, 2S (7.4V) 2600mAh	£20.00
PPL-40C2S-3300	40C/80C, 2S (7.4V) 3300mAh	£25.00

PPL-25C3S-0350	25C/50C, 3S (11.1V) 350mAh	£8.50
PPL-60C3S-0450	60C/120C, 3S (11.1V) 450mAh	£9.50
PPL-60C3S-0800	60C/120C, 3S (11.1V) 800mAh	£12.00
PPL-60C3S-1000	60C/120C, 3S (11.1V) 1000mAh	£15.00
PPL-60C3S-1300	60C/120C, 3S (11.1V) 1300mAh	£17.00
PPL-60C3S-1800	60C/120C, 3S (11.1V) 1800mAh	£21.75
PPL-60C3S-2200	60C/120C, 3S (11.1V) 2200mAh	£24.00
PPL-60C3S-2600	60C/120C, 3S (11.1V) 2600mAh	£30.00
PPL-60C3S-3300	60C/120C, 3S (11.1V) 3300mAh	£38.00
PPL-60C3S-3700	60C/120C, 3S (11.1V) 3700mAh	£43.00
PPL-60C3S-4500	60C/120C, 3S (11.1V) 4500mAh	£55.50
PPL-60C3S-5000	40C/80C, 3S (11.1V) 5000mAh	£56.50
PPL-60C3S-6000	60C/120C, 3S (11.1V) 6000mAh	£70.00

PPL-60C4S-1800	60C/120C, 4S (14.8V) 1800mAh	£30.00
PPL-60C4S-2200	60C/120C, 4S (14.8V) 2200mAh	£33.50
PPL-60C4S-2600	60C/120C, 4S (14.8V) 2600mAh	£39.50
PPL-60C4S-3300	60C/120C, 4S (14.8V) 3300mAh	£49.00
PPL-60C4S-3700	60C/120C, 4S (14.8V) 3700mAh	£55.00
PPL-60C4S-4500	60C/120C, 4S (14.8V) 4500mAh	£70.00
PPL-60C4S-5000	60C/120C, 4S (14.8V) 5000mAh	£78.50
PPL-60C4S-6000	60C/120C, 4S (14.8V) 6000mAh	£96.00

PPL-60C5S-3300	60C/120C, 5S (18.5V) 3300mAh	£63.00
PPL-60C5S-3700	60C/120C, 5S (18.5V) 3700mAh	£71.00
PPL-60C5S-4500	60C/120C, 5S (18.5V) 4500mAh	£86.50
PPL-60C5S-5000	60C/120C, 5S (18.5V) 5000mAh	£96.00
PPL-60C5S-6000	60C/120C, 5S (18.5V) 6000mAh	£118.00

PPL-60C6S-3300	60C/120C, 6S (22.2V) 3300mAh	£79.00
PPL-60C6S-3700	60C/120C, 6S (22.2V) 3700mAh	£85.00
PPL-60C6S-4500	60C/120C, 6S (22.2V) 4500mAh	£103.00
PPL-60C6S-5000	60C/120C, 6S (22.2V) 5000mAh	£115.00
PPL-60C6S-6000	60C/120C, 6S (22.2V) 6000mAh	£139.00

Prop Drivers/Adapters

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



Brushless Electronic Speed Controllers

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

* XT60, ** XT90 on battery side



UBEC's (Voltage Stabilisers/Regulators)

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

Approved by The BMFA
for the Payload and
Egg Challenges

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



Outrunners - Professional Black Series

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

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



Great Value Quality Servos From £3.28

Make	Part Number	Type	Weight	Torque / Speed	Description	Price	
EMAX	ES9251 II	Sub Micro	4.0g	0.27Kg @ 4.8V - 0.08sec/60°	Digital, Light Weight, High Speed	1pcs £8.79ea 5pcs £7.91ea	
4-Max	4M-037AH-0045	Sub Micro	3.7g	0.45Kg @ 4.8V - 0.10sec/60° 0.55Kg @ 6.0V - 0.08sec/60°	Analog, Light Weight, High Speed	1pcs £6.84ea 5pcs £6.16ea	
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 @ 6.0V - 0.10sec/60°	Digital, High Voltage, Metal Geared, 8mm Thick	1pcs £9.94ea 5pcs £8.95ea	
New	4-Max	4M-053HVMG-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	
New	4-Max	4M-125HVMG-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
New	4-Max	4M-130HVMG-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	
New	4-Max	4M-183HVMG-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	
New	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 £14.89ea 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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Ultra Light Weight Spinners

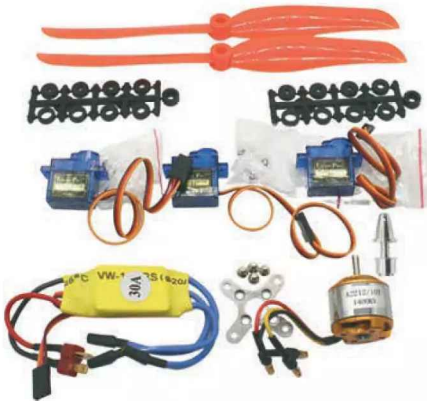
These ultra light weight spinners for electric motors are supplied with a specially cut aluminium backplate (like a propeller) which pulls cooling air through the nose of the spinner and then forces it out of the back and in to the motor, helping keep the motor cool even on a hot day. Available in 6 sizes and 5 colours.

Diameter	Weight	Price
51mm	19g	£8.79
57mm	22g	£9.89
63mm	25g	£10.89
70mm	36g	£13.19
75mm	43g	£15.39
83mm	48g	£17.04



Value Power Packs **£24.99**

After a very long search and the testing of many samples, we are thrilled to announce our series of Value Power Packages that are designed for the RC modeller on a budget



Package	Supplied Prop	Static Thrust @11.1V	Est. Speed
1000kv	10x6	515g/ 1.14lbs	35MPH
1200kv	9x5	635g/ 1.40lbs	42MPH
1400kv	8x6	810g/ 1.79lbs	55MPH
1800kv	7x3.5	490g/ 1.08lbs	52MPH
2200kv	6x3.5	470g/ 1.04lbs	59MPH

Each Power Pack consists of ...
1x Brushless Outrunner Motor
1x Rear Mounting Kit
1x Prop Driver/Adapter
1x 30A Brushless ESC
2x Suitable props and adapters
3x Tower Pro SG90 Servos



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5 Metres!

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Wingspan 2200mm/86"
Battery 10S 5000mAh

Weight 8500g/18.7lbs
(Supplied Separately)



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Battery 6S 5000mAh

Weight 6000g/13.2lbs
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Miles 2.H Hawk Major
Wingspan 2480mm/98"
Battery 10S 5000mAh

Weight 9300g/20.5lbs
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Cloud Clipper
Wingspan 1800mm/71"
Battery 3S 2200mAh

Weight 1800g/4lbs
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Cloud Walker
Wingspan 1650mm/65"
Battery 3S 2200mAh

Weight 1250g/2.75lbs
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Lippisch G108
Wingspan 2750mm/108.25"
Battery 3S 2200mAh - 3S 3700mAh

Weight 1700g/3.75lbs
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£139.99

Super Sinbad
Wingspan 2500mm/98"
Battery 3S 2 200mAh - 3S 3700mAh

Weight 1900g/4.2lbs
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Micro Sinbad
Wingspan 1230mm/48.4"
Battery 2S 350mAh

Weight 190g/6.7oz
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Wingspan 2600mm/102"
Battery 3S 2200mAh - 3S 3700mAh

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Wingspan 1200mm/27.25"
Battery 2S 450mAh

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VP2600 Glider
Wingspan 2600mm/102"
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Slingsby Swallow T45
Wingspan 1800mm/70.87"
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Wingspan 3400mm/133.86"
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Thanks for all your support!



Tony Ray Aero Model

Our Tony Ray range of balsa model kits is set to expand further this year. Firstly, with a 1/5" Bucker Jungmaster BU133, then with a 1/6" FW190 and later this year with a famous British WWII model.



Micro series

Tony's range of 11 micro models are designed for indoor flying using micro servos and receivers compatible with Spektrum & Futaba.



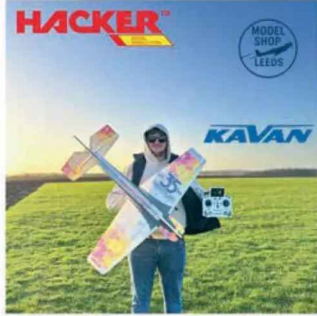
Kavan Radios

Kavan are expanding their range of radios that are manufactured by FrSky but to Kavan's specification - their latest budget programmable set is about £95.00



Hacker CZ

Hackers range of EPP indoor & outdoor models continues to expand! Their latest Aerix F3P will be featured in RCM&E shortly.



Brand Focus

A selection of old school brands from the US:



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BRIGHT WHITE INTERIOR **LENGTH UP TO 40'**



Model	Dims	Order Code	exc.VAT	inc.VAT	WAS	NOW
CIG81212	3.6 x 3.6 x 2.5m	140613584	£229.98	£287.98	£275.98	£310.80
CIG81015	4.5 x 3 x 2.4m	140613570	£259.00	£331.20	£318.00	£358.80
CIG81216	4.9 x 3.7 x 2.5m	140613574	£299.00	£378.00	£378.00	£382.80
CIG81020	6.1 x 3 x 2.4m	140613572	£319.00	£406.80	£406.80	£442.80
CIG81220	6.1 x 3.7 x 2.5m	140613576	£369.00	£466.80	£466.80	£502.80
CIG81224	7.3 x 3.7 x 2.5m	140613578	£459.00	£574.80	£574.80	£610.80
CIG1432	9.74 x 3.63 x 6.5m	140613594	£1069.00	£1294.80	£1294.80	£1382.80
CIG1640	12x4.9x4.3m	140613596	£2299.00	-	-	£2758.80



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Model	Shelf capacity	Dims WxDxH (mm)	Order Code	exc.VAT	inc.VAT
CSM5150RP	150kg	800x300x1500	070710802	£39.98	£47.98
CSM5350RP	350kg	900x400x1800	070710808	£52.99	£63.59

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CMD10
WAS £838.80 inc.VAT

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Model	Motor (W)	Speeds	Order Code	exc.VAT	inc.VAT	WAS	NOW
CDP5E	350/5	060712030	£84.99	-	£101.99	-	£101.99
CDP102B	350/5	060715512	£99.98	£131.98	£119.98	-	£119.98
CDP152B	450/12	060715522	£169.98	£214.80	£208.98	-	£208.98
CDP452B	550/16	060715575	£279.00	£346.80	£334.80	-	£334.80
CDP502F	1100/12	060715592	£649.00	£810.00	£778.80	-	£778.80

B = Bench mounted
F = Floor standing

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Model	Duty Wheel Dia.	Order Code	exc.VAT	inc.VAT
CBG6RZ	PRO 150mm	060510211	£64.99	£77.99
CBG6250LW	HD 150mm	060716252	£69.98	£83.98
CBG8370LW	HD 200mm	060718371	£94.99	£113.99

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- All totally enclosed & fan ventilated for reliable long-term service

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Shaft	Hp	Speed	Order Code	exc.VAT	inc.VAT
1/3	4 pole	010210426	£79.98	£95.98	
1	2 pole	010210431	£99.98	£119.98	
3/4	4 pole	010210430	£104.99	£125.99	
2	2 pole	010210435	£124.99	£149.99	
3	2 pole	010210465	£154.99	£185.99	
4	2 pole	010210471	£184.99	£221.99	

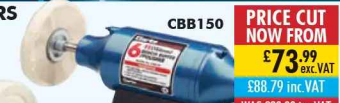
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Inside the box are hundreds of model aeroplanes and flying sites waiting to be explored. Simulated, of course!



REAL FLIGHT EVOLUTION

The Editor looks at the latest iteration of a popular R/C flight simulator

Words & Photos: **Kevin Crozier**

When reviewing the Spektrum NX8+ transmitter for the March issue the USB Settings section of the manual caught my eye. It's only a few lines but mentions putting the Tx into Game Controller mode, allowing it to be connected to a PC using a USB cable to operate a flight simulator. This led me to ponder what a current state of the art R/C sim looks like these days, it having been many years since I last used one. So, I posed a question to Spektrum's UK distributor, Logic RC, asking if I could test a copy of the RealFlight Evolution sim from Horizon Hobby whilst using the NX8+ in Game Controller mode.

Logic's response was very supportive, but they suggested using the NX8+ via RF using a Spektrum Wireless USB Dongle, thus removing the need to use a wired connection. Even better, they also offered to send a copy of RealFlight complete with a Spektrum Interlink DX Simulator Controller so that I could compare it to flying with a 'real' transmitter.



It needs a big box as this version comes with an InterLink DX controller complete with USB cable extending from the aerial socket.

The only problem I now faced was finding a suitable Windows PC as my computer is a Mac. I did toy with the idea of using Parallels Desktop for Mac to run Windows on my laptop but the underwhelming responses on the RealFlight forum when doing this indicated that it is best to run RFEvolution on a Windows PC, either 8, 10 or 11. Fortunately, the IT department at work had a spare Windows 10 laptop available that I could use.

LETTING OFF STEAM

Since the Interlink DX Simulator Controller is a facsimile of a Spektrum R/C transmitter, albeit one with a USB lead attached where the aerial usually resides, it comes as no surprise that it comes in similar 'egg carton' packaging to the NX8+ transmitter. The RealFlight software is provided as a Steam key printed on a card.

A Steam key is a 15-character code used to redeem games or software onto an online Steam account. You'll need to create an account if you don't already have one. Once redeemed the software is permanently added to your Steam library for download. Steam eliminates the need to use DVDs for installation. There's no serial number to keep track of and it's easy to add RealFlight to replacement PCs in the future.



Controller manual is a usual reference for switch positions. Alongside is the Steam Key with a code to download the RealFlight software.

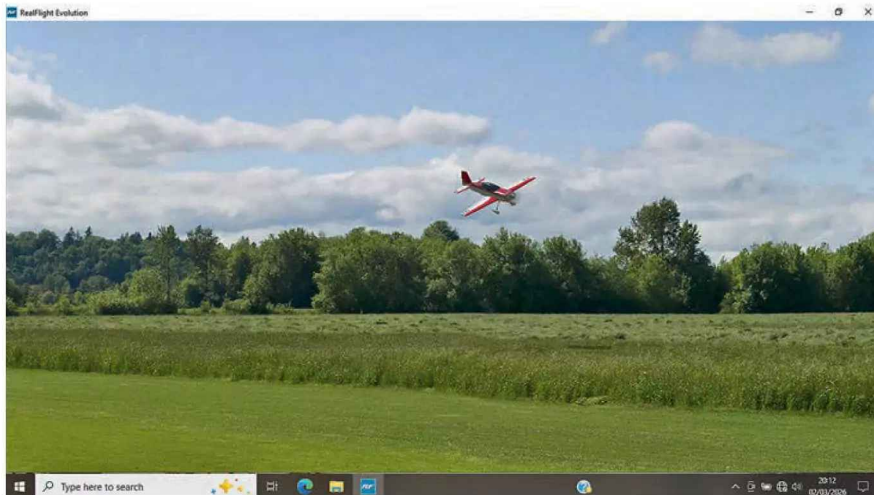
Usually, when booting up new tech or installing software I am guaranteed to end up very frustrated and with a pounding headache. But the whole process was pretty much seamless and in just a short while I

had RealFlight Evolution up and running on screen.

INTERLINK DX

I couldn't resist plugging the Interlink DX controller into a USB port to have a quick play. Logic RC's website claims that using the controller 'virtually eliminates the need to use a mouse or keyboard' and once the software is running you can use the scroll bar to navigate the various menus and to choose aircraft and different flying fields. I spent a happy hour exploring the various options, trying out the different aeroplanes (many with multiple colour schemes), helicopters (flybar & flybarless) and I even tried out a quadcopter or two!

In use the Interlink DX controller is just like flying with a mid-range Spektrum transmitter, emulating the brand's usual switch locations and functions. I did find the gimbals a bit stiff, even with the tensions slackened off, and the stick ends are a bit fierce. You can certainly feel the circle of teeth on your thumb-pads if you're a thumbs-on-top flier like me! But, overall, the effect is very life-like and you soon forget that you are using a cable connected controller.



Full screen view of my favourite aeroplane, the Extra 300, dropping into Carl Henson field. That's what happens when you release the sticks to take a screenshot!



There's a broad selection of scale models such as this 20cc Mustang complete with flaps and retracts. Nice!



Although the vast majority of planes are from the Horizon Hobby stable there are others too. You'll recognise this one!



Under a cover on the back of the Interlink's case is a stick mode changing switch.



There's also a socket to plug a trainer cord into so that you can use the controller to connect a Spektrum transmitter to the simulator.



There's a wealth of helicopters, both sport and scale. Many sport models like this Rave can be flown as flybar or flybarless versions.

Over the years, I've used several makes of Tx, so I find that some of Spektrum's chosen switch functions are a bit alien to me. One area that I've started to explore is using the Edit function in the Select Controller menu to configure the switches to suit my own preferences.

On the back of the controller is a mode changing switch so that you can easily swap to your preferred stick mode if required. The default setting is Mode 2. A safety plug ensures that the mode cannot be changed accidentally.

There's also a socket on the rear case to connect a 'real' Spektrum transmitter to the simulator via a trainer cord. But if you want to do that then it's probably best to use a wireless dongle...

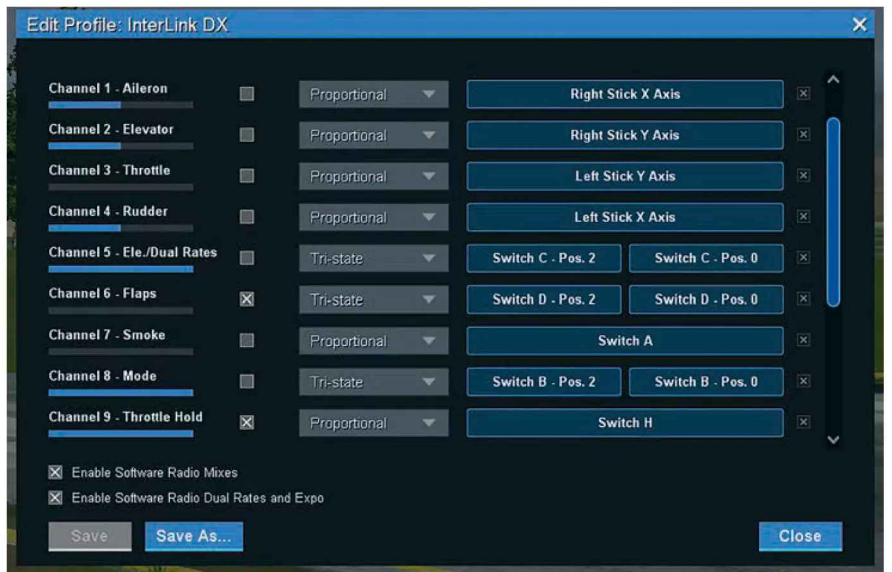


Our NX8+ transmitter was easy to connect via the wireless dongle, binding it via RF.

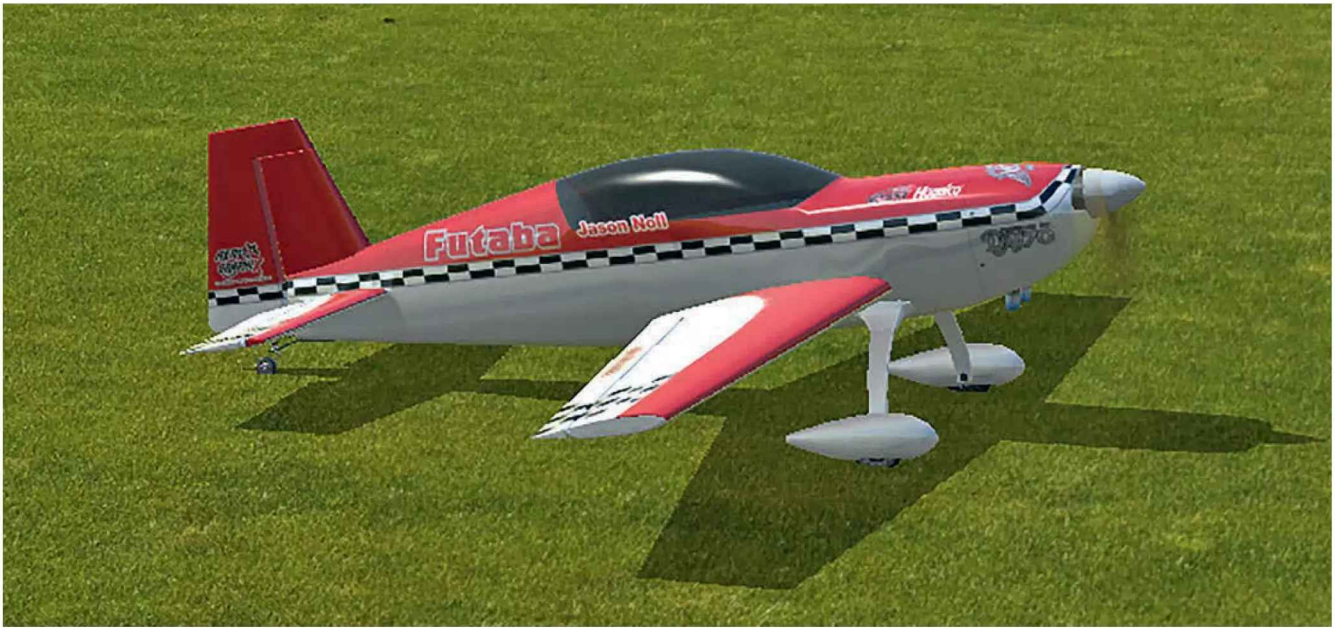
WIRELESS USB DONGLE

The WS2000 USB dongle allows you to wirelessly connect (using RF) your computer to a Spektrum DSMX or DSM2 transmitter. It also works with Android tablets and mobile devices. No additional drivers are required and it's very much plug and play – provided you remember to bind it to your radio first. Guess how I know that! Fortunately, for lesser mortals like me, sandwiched between the rear card of the bubble pack are easy-to-follow instructions showing how to bind the dongle to a transmitter. Once I had discovered those notes I swapped over to the new Spektrum NX8+ transmitter to operate the RF Evolution sim.

When lining up a nice scale Mustang fighter on the runway I was a little disappointed to find that my preferred switch functions and positions didn't work, necessitating a return to the Select Controller menu to configure the switches to operate as I desired. Things were better afterwards but there are still a few things that I would like to change so this is very



Use the Edit screen to change settings and switch functions of the simulator to match those on your transmitter.



A closer look at the Extra 300. Several different colour schemes are available for this and many other aeroplanes.



I'm hoping to try aerotowing later this year so this simulation offers some useful practice.



One of my bucket list models is the Flair Puppeteer. In the meantime, I'll enjoy flying the RF Sopwith Pup.

much work in progress. This includes setting up mixes, expo and flight modes.

Using a 'real' transmitter does feel better than using the InterLink DX, especially if it is a higher quality one like the NX8+ with smoother sticks etc. But to be honest the InterLink DX works just fine for most of my simulator flying when sitting in my favourite armchair with the laptop on my knee. It also has the benefit of reducing wear and tear on your 'real' transmitter, which is something well worth considering as it's easy to find yourself flying with RealFlight for an hour or two. Armchair flying time easily racks up, far more than at a real flying field, and with it the usage on your transmitter's gimbals and switches.

CHOOSE YOUR AIRCRAFT & SCENERY

In total there are more than 300 different aircraft to fly at over 75 flying sites. There are even a blimp and a swamp airboat!

As previously mentioned, you can spend time setting up the controller or transmitter to suit your own preferences but, generally, I am happy to use the settings as they come. There are so many aeroplanes and helicopters (and quads!), some of which are very sensitive and some which are a bit tame. But there are plenty of others that feel about right so you soon get a feel of the ones to come back to. My favourite is the Extra 300 as it feels pretty similar to flying my Pilot RC Extra.

If there is a model that you would like to fly but maybe it's too much of a handful then you can edit it in the My RealFlight menu. But I'd be wary of fiddling too much!

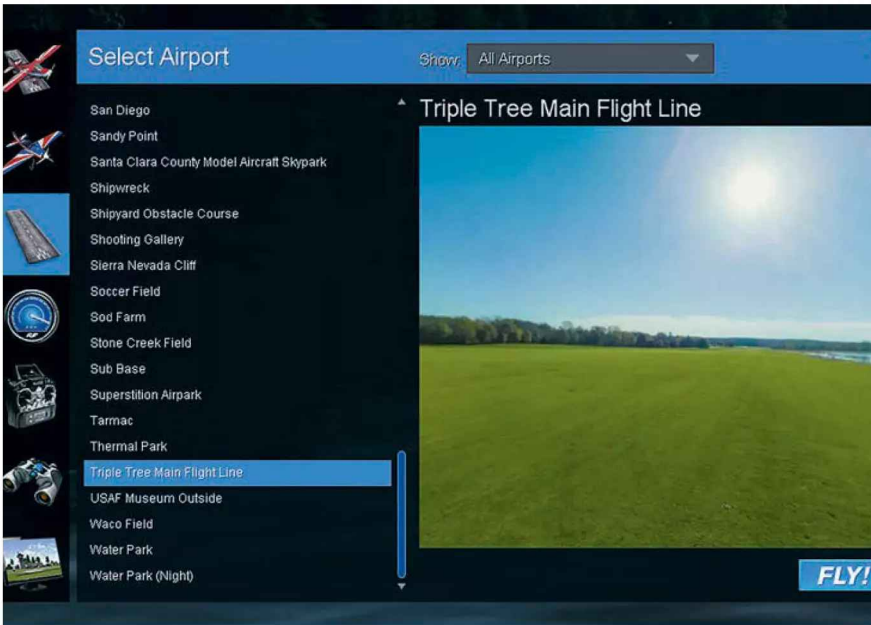
The same goes for flying sites of which there are a bewildering number to explore. Since this is a US product you might be forgiven for thinking that they would all be wide-open, blue-sky strips but that's far from the case. In fact, it would seem that a fair number of the ones based on real flying fields are quite closed in, with trees at the ends and on either side. The sim also faithfully reproduces the benches, fences and →



Schneider floatplane ticking over with a realistic Photofield in the background.



The same model in a 3D generated bayou. The background is not as realistic as a Photofield but if, say, you were flying in FPV you could take the model behind those trees. But with a Photofield it's a fixed 2D backdrop.



The wide-open spaces of Triple Tree Aerodrome, a recent addition to the Airport list. Not all the fields have the scenery so far away and can be a bit challenging!



This takes me back! My first helicopter used floats as a training undercarriage.

buildings at those fields so some of them feel quite cluttered and can present quite a challenge to fly from. Having said that there are quite a few that feel like typical UK grass field sites, especially those with some nice green scenery in the distance. So, as with your favourite planes, you soon learn which ones to come back to.

Regarding flying sites, I did find that these varied in visual quality depending on whether they were 3D Fields, completely modelled using computer graphics, or 2D Photofields based on 360-degree, high resolution panoramic pictures of real flying sites. When flying I like my flying sites to look realistic so my preference is for the Photofields, but the 3D Fields are best for flying behind trees and buildings etc., say when flying an FPV drone.

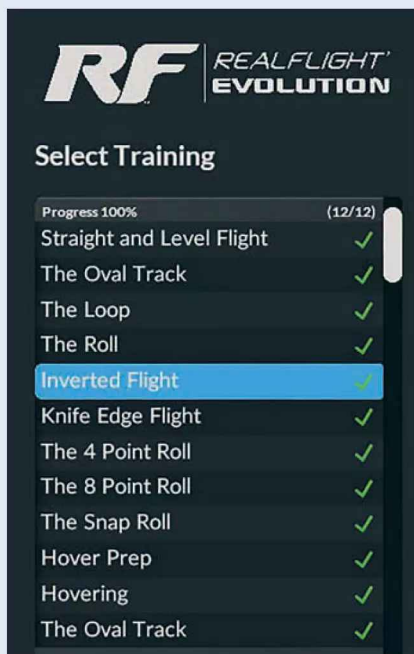
FLYING LESSONS

An obvious group of potential customers for RealFlight are those just beginning their R/C journey. There are plenty of trainer type models to choose from so maybe choose one that most closely resembles your real trainer. If you are learning to fly using a Horizon model, then chances are that there will be a simulator version of it anyway!

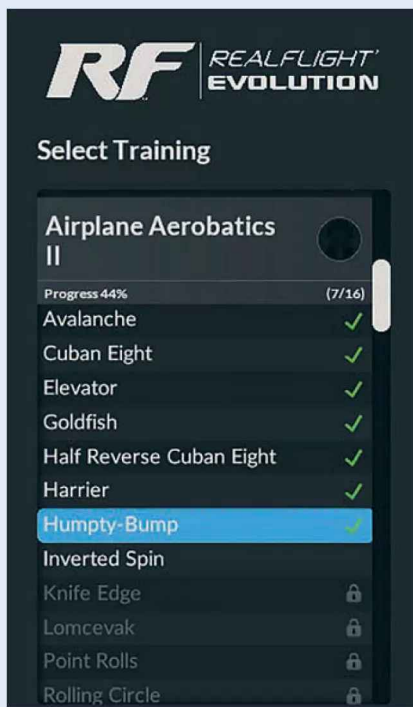
But if you are a total novice, I would caution against diving straight in using RealFlight as just with real model flying it's best used after taking some advice from a knowledgeable instructor. Maybe take your laptop along to your model club so that your instructor can help you set it up with a suitable aircraft and airfield, hopefully replicating your own model and flying site as closely as possible. I say this because a raw novice may struggle with the terminology used, as my clubmate Tom Hall discovered when he purchased a copy:



Scenarios pair up aircraft with suitable airports. Here's the pair for Beginner Airplane Training. However, both the model and the field can be changed if you don't like them.



Airplane Aerobatics training lists. Each lesson builds on techniques learnt in the previous video.



The graphics I also found adequate but disappointing, especially as I installed a new video card with dedicated memory, which didn't seem to make much difference.

I found the most useful instructions on rcgroups.com: Flight Notes By Flightengr - Guide to Using Your Own Radio with RealFlight

At the end of the day, it's a very clever bit of software with lots of settings if you are that way inclined - and have the time to play. It's also a great marketing tool for the plane manufacturers."

VIRTUAL INSTRUCTOR

Once you have a basic trainer set up there's a useful set of flying lessons that you can work through. The idea is that you watch a lesson being flown by an instructor and then try it yourself. However, chances are that you will find that the 'Try It' icon is greyed out. What you need to do is to replay the lesson and immediately click on 'Try It' at which point the recording will stop and you will see a 'ghost' version of the aeroplane with which to copy the task set by the instructor.



There are many jets too, including this impressive airliner. It's probably best flown from a tarmac strip though!

DATAFILE

Name:	RealFlight Evolution RC Flight Simulator with InterLink
Manufacturer:	RealFlight
UK importer:	Logic RC https://www.logicrc.com
Product code:	A-RFL2000
RRP:	£209.99
Wireless Dongle:	P-SPMWS2000
RRP:	£49.99

ADVANCED FLYING

Even when you have learnt to fly, you'd be foolish to say that you never stop learning and there's always new things to try in this hobby. I can honestly say that an older, more basic sim was a great help to me many years ago which I used to train myself to perform knife edge, inverted circuits, slow rolls, four-point rolls and much more. Without it I would surely have input either the rudder or elevator in the wrong direction – probably both!

With RealFlight it was a pleasure to acquaint myself with all of the above (which I regularly fly, but not for such extended periods as I'm happy to do on the sim), plus try out a few new advanced aerobatics that I have wanted to perfect for quite a while. Helpfully there are lessons for many of those too in the Airplane Aerobatics training sections.

RealFlight also helped me get back on track with my helicopter flying, especially performing 3D aeros, which I have become very rusty with (avoiding!) in recent years.

TRY IT

There's lots of reasons for using the RealFlight Evolution simulator, whether you're a tyro pilot practicing the basics or a more experienced flier wishing to improve your aerobatics. And with all the awful weather we've been having lately, with soaking wet winters and windy summers, it will allow you to keep your hand in until you can get back to your local flying field.

Several different options are available besides the Interlink DX version reviewed here. So why not visit the Simulators page at

<https://www.logicrc.com> to see what's on offer. ■



Training scenarios show a plane being flown by an instructor, with the stick movements displayed on the Tx to the right. The 'Try It' button is only made available after watching the video in full and pressing Replay.

"The RealFlight Simulator appeared to be the most recommended on the internet. Just to get some basic practice, the Trainer Edition with the wireless dongle seemed good value. Using the latest version, I expected a straightforward installation using the dongle and my Spektrum DX6e. I think my biggest gripe was trying to set up my transmitter. At this point the only R/C experience I had was a few flights with Chris, my instructor, and so a lot of the terminology was alien to me.

The software install was straightforward. Installing the dongle and then binding the transmitter was okay. Installing the controller was a bit hit and miss as there was no Spektrum DX6e listed. I expected just to select a plane and fly but of course it was not that simple. The DX6e only has six channels, and the dongle has 8 channels, and I think the RealFlight controller has 15 channels. With what I know now this is not the end of the world but I had to dig around to get things working. I ended up disabling most of the channels in RealFlight and used the six channels on my transmitter. I also ended up using a keyboard shortcut to toggle the SAFE and ASX3 settings which took a little while to work out. This was frustrating until I realised what was happening.



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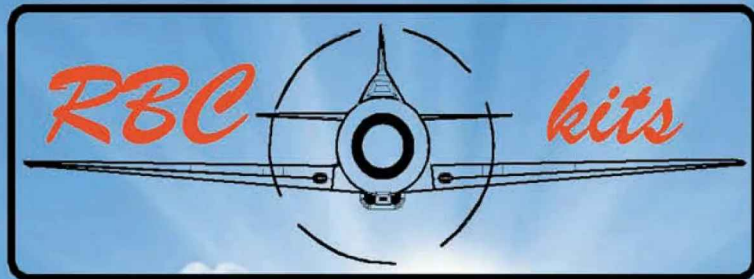
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Kevin Crozier

Editor

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A NEW SEASON STARTS

As the new F3A season gets going, **Keith Jackson** looks at wing fences and their positive benefit to precision flying. Also included is a first look at the Equinox fully composite biplane by RC-Composit

Words: **Keith Jackson**, Photos: **Keith Jackson, Algirdas Ungulaitis, Peter Jenkins, Peter Uhlig**

As I write this column flying activities have come to an end, with my local flying strip succumbing to the effects of the winter period, preventing any grass cutting and rendering the surface too long for any safe take-offs and landings. At this point in time the Strato Ultimate has had about 40 flights in total.

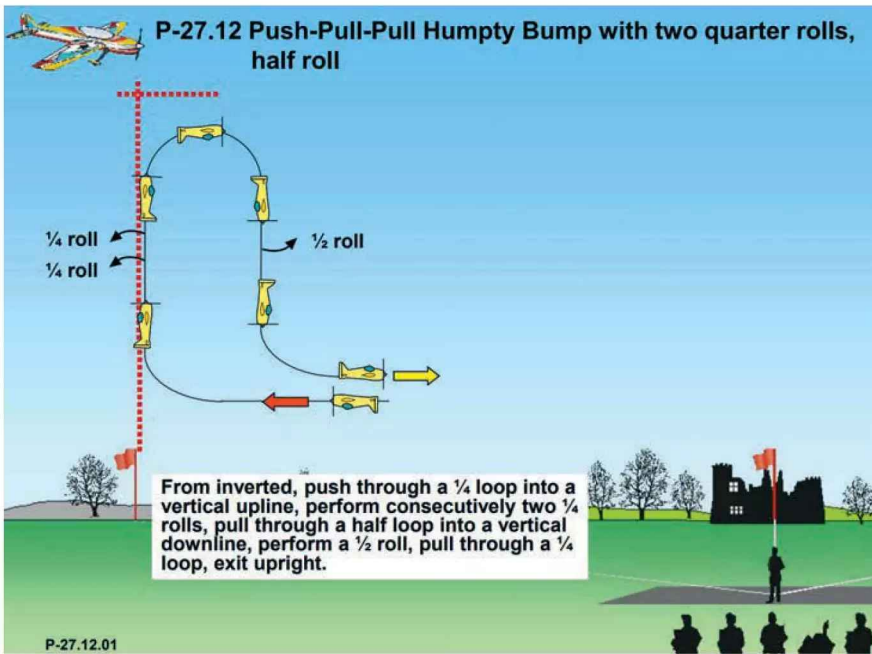
Initially, flights with the Strato Ultimate felt good, with an excellent control response and rolls to die for. Then an issue brought about by me using different LiPo pack weights caused an unexpected change in the C of G position by moving it as much as 23 mm forwards. This made stall turns quite difficult and the general characteristics of the model quite average. A brief exchange of emails with the designer Byung Joon Park persuaded me to check the C of G position and rectify it back to the correct position at 315 mm back from the leading



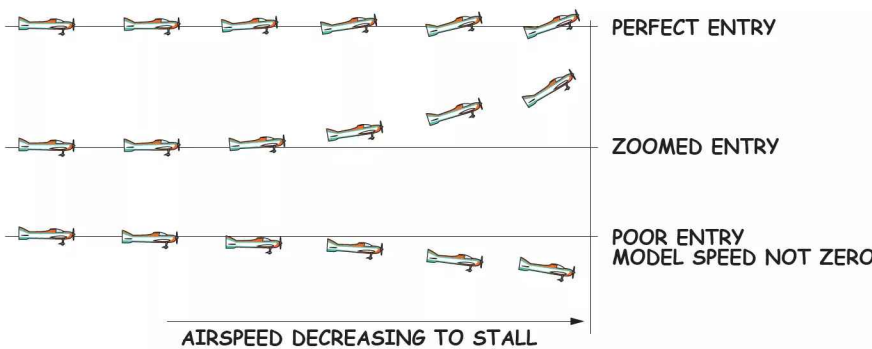
BJ Craft Strato Ultimate.

A small but select entry at the BMFA Centralised and National League Competition, Leicester, September 2025.

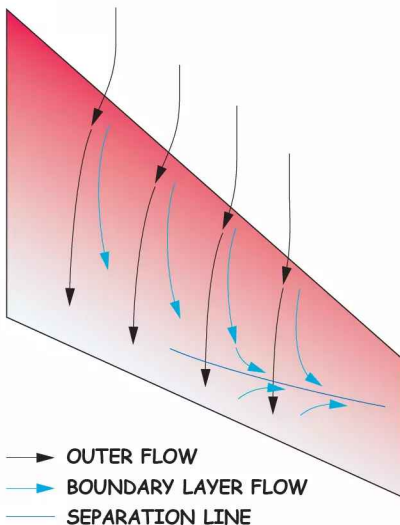




Pull to horizontal following a humpty bump manoeuvre. Any imbalance in the model set up will work against a clean exit from manoeuvres like this. This image was extracted from an excellent PowerPoint presentation by Peter Uhlig for the FAI, available for download at www.ukf3a.com/WP/schedules



Spin Entry can be tricky! Ideally the model adopts a pronounced nose up attitude just prior to stalling.



Airflow across a swept wing. Graphic is based on a picture from www.aviation.stackexchange.com



Strato wing fence. See 'Wing Fences' overleaf.

edge. I did this step by step and checking the flight characteristics each time a change was made. By the end of it I arrived back at the design intent C of G and as if by magic the stall turns were compact and visually less forced, resulting in a pleasing rotation about the model's Centre of Gravity.

BACK ON TRACK

The Strato was now back on track with the roll aspect of the model being particularly good. The swept wing tips were much more visible than on my Glacial biplane, allowing me to judge the point locations with more precision. Control adjustments were at the stage of being fine-tuned with throw and exponential being balanced between responsiveness to give crisp manoeuvre transitions and the docility that is required for fuss free flights. When the changes I was making in exponential reduced to 1 - 2% then I knew I was there with the model setup and the differences between flying sessions were more about the amount of practice I'd had than a real need to alter the model's response.

One of the key priorities of an F3A design is to have directional stability, which is the ability of the model to continue on a course despite being subjected to external forces such as wind gusts or turbulence. Straight and level stability is required to help keep the model 'on line' when flying through an aerobatic turnaround sequence. It is also particularly important when you need the model to exit a pull or push to a horizontal line cleanly without any pilot input, ready for the next manoeuvre.

A typical example of this is an exit from a spin or from a humpty bump and the pilot has to ensure airspeed of the model is not too low so that it is affected by wind or turbulence. In fact, this is also where you really need to ensure the wings are balanced and have no warps or aileron offset as these issues will definitely cause a roll deviation, causing you to lose heading straight away. Some designs are better at maintaining the schedule line than others and, as usual, there appears to be no one design that suits all of the many requirements for a good F3A model. ➔

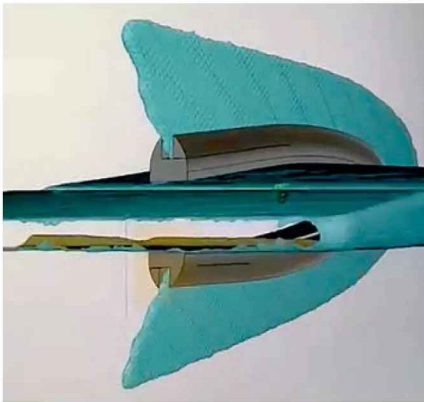
Advanced Precision Aerobatics Edition 3

A Guide to Flying the FAI A27 and P27 Schedules

Kevin Caton & Peter J Jenkins



Advanced Precision Aerobatics Edition 3 by Kevin Caton and Peter Jenkins.



CAD design for a 3D printed wing fence mount, allowing for removable fences.

WING FENCES

Models with swept, high aspect ratio wings can suffer from a certain amount of wing rock as they pull sharply from diving manoeuvres which could cause problems for the pilot. Also, they suffer from a tendency to tip stall earlier than a model with a lower aspect ratio wing making spin entries, where the model has to adopt a pronounced nose up attitude prior to the stall, more difficult to get right every time. It should be remembered that designs with these wing planforms have arisen as a result of the demands of the schedules being flown and with every approach there are always compromises.

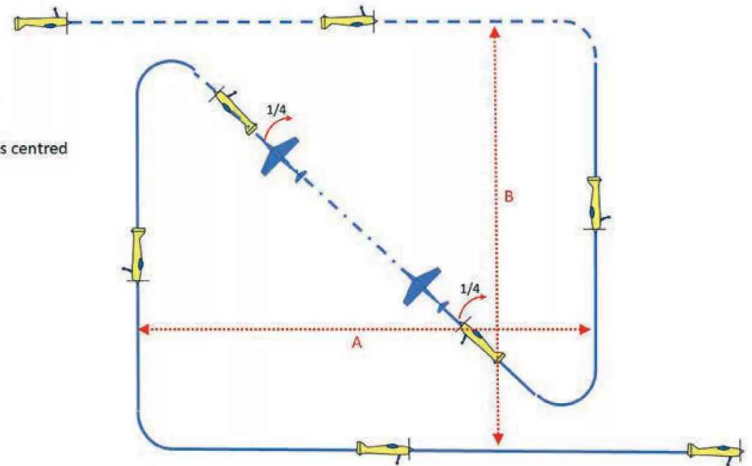
A way to circumvent these issues is to modify the area of the wing near the tip so as to delay the start of the tip stall and one way this can be achieved is by using a wing fence approach. On swept wings, wing fences are used to prevent spanwise flow of air which progressively changes direction from across the wing chord near the middle of the wing, to virtually spanwise flow near the wing tips. This can be counteracted using wing fences which force the airflow back across the chord of the wing, delaying the onset of a tip stall as the angle of wing incidence increases.

Judging Criteria

Knife edge flight is centred on the 45° line

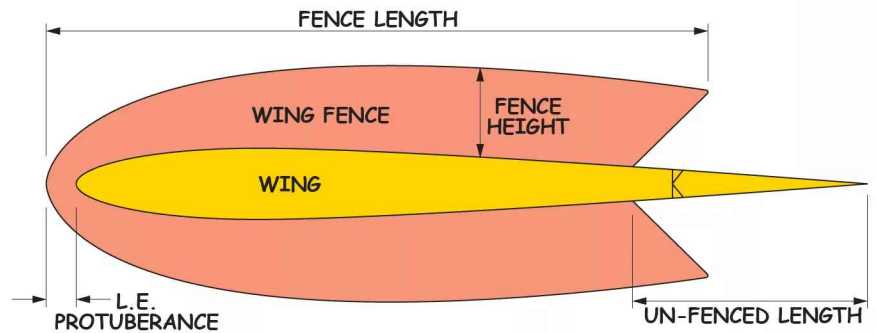
All radii equal

NB: A=B



P-27.15 Square from Top with quarter roll, knife-edge flight, quarter roll– K4

P-27.15 Square from Top with quarter roll, knife-edge flight, quarter roll. Diagram from 'Advanced Precision Aerobatics Edition 3'.



Wing fence design parameters.

Whilst there are multiple references to these devices online, most concern the placement of wing fences in the middle of the wing or of two or more fences across the span. The idea of forcing the air chordwise near the tip using fences however is the same. References will state that the fence primarily affects the upper surface flow and the design of these units are biased accordingly. I haven't come across an article that relates their use to aerobatic aircraft using symmetrical wing sections but I guess the principal is the same for the lower surface and as such the wing fence needs to be symmetrical for our purposes.

The proof of this is in the flying and two appropriately sized wing fences were fixed to the Strato Ultimate wings to trial this modification. The angle of the fences was, rightly or wrongly, set to give a small amount of toe-in, amounting to approximately 5 mm at the leading edge. The difference in flight characteristics was extraordinary, with the Strato now adopting a much more confident pose when sharply exiting pull outs.

A particularly good example of this is P-27.15 Square from Top with quarter roll, knife-edge flight, quarter roll. This manoeuvre starts inverted from a top line and requires the model to pull into a vertical dive, eventually tracing the shape of a square, as shown in the figure

nearby, taken from the excellent publication 'Advanced Precision Aerobatics Edition 3' by Kevin Caton and Peter Jenkins. The second pull is tight from the vertical dive to an ascending 45° climb whereupon the model rolls to knife edge. It is this high-G pull that really shows how well the wing fences work in comparison to the original wing.

More conventional pull-outs to a horizontal line are found throughout P-27 and in all cases the wings of the Strato were rock solid. The spin entry was also far better with quite ridiculous nose up attitudes prior to the stall being achievable, if desired.

SHAPES & SIZES

Rules governing the shapes and sizes of wing fences are less easy to find. In general, all of the shapes I have seen appear to wrap around the leading edge and finish somewhat short of the aileron hinge line. Some references state that these devices only affect the flow just above the Boundary Layer and even on full size wings this amounts to just a few millimetres in depth. Others have stated that at this depth wing fences have no effect and instead need to be many multiples of the boundary layer high. Wing fences used on model aircraft appear to be at least the depth of the wing section on each surface, meaning



RC-Composit version of Lassi Nurila's Glacial biplane.

they are relatively large structures and as such are a bit cumbersome and prone to transport damage.

The boundary layer gets thicker toward the trailing edge of the wing so if fence height were based on the boundary layer, then the fence would be highest at the trailing edge of the wing. Yet literature suggests that extending the length of a fence much beyond 50% chord does not increase its effectiveness in the slightest.

In adding these structures to your model, it must be made clear that the extra surface area presented to the airflow will increase skin drag, thereby reducing the overall efficiency of the model. So, a compromise has to be sought in terms of fence sizes used.

To add some credibility to the observations made above I tried to research these results online and was almost instantly swamped by numerous papers which unfortunately were more suited to aerodynamics professionals rather than lowly model aircraft pilots. At the risk of cherry-picking favourable results, I came across a good paper 'Stall Characteristics Study of Aircraft Wing with Fence', released by P.B. College of Engineering, Tamil Nadu in 2016, which was published by www.ijert.org (IJERTV5I5050886). This study compared a standard airfoil with a condition where one wing fence was fitted and then a second added, using ANSYS software for the computation of lift and drag coefficients. Results show that it was possible to significantly extend the angle of attack prior to stall when the base aerofoil was fitted with wing fences. Strangely, the second fence seemed not to add to the gain observed in the coefficient of lift.

Fitting the wing fences to the Strato Ultimate wing was not straightforward as the tips are not parallel to the airflow. Initially some masking tape was fixed to the wing and the 1.5mm plywood fences were glued to the tape. After proving that they had a beneficial effect, I wanted to address the dimensions of



Schematic of the new Equinox.



Equinox wing construction. It's a bit scary seeing how little there is inside modern composite wings!

the fences and so, ideally, they would need to be removable to allow modifications. Help with this came from fellow South Cheshire RCS club member Dean Hughes who was able to create a 3D printed wing fence mount, which would allow the fence to be slid into place. Tests with this are on-going and I will report the results, hopefully in the next edition.

Finally, I'd like to say that I am not an aerodynamicist and would welcome any input from readers of this article with a view to understanding these devices more thoroughly.

EQUINOX BY RC-COMPOSIT

This is the latest fully composite biplane to be released for production following the 2025 World Championships, originally designed by Arnaud Poyet and Pascal Nowik (Pegase Composites, formerly from ZN Line). Following my enquiry into this model the owner of RC-Composit, Algirdas Ungulaitis, contacted me with the following text:

"A year ago, Pascal Nowik from Pegase Composites wrote to me and offered to produce a new F3A airplane model. I have been producing airplane models for 20 years at RC-Composit. We started with plywood kits, later producing



Fuselage interior construction.

composite models for professional sports. Currently, four composite F3A airplane models are being produced: Contrast, Vortex, Glacial and the latest 2026 model, Equinox. The design took a lot of time, there was a lot of communication with the airplane model designer Arnaud Poyet, and all the details were co-ordinated before the product reached the buyers.

Dimensions of the airplane model:

Length - 1912 mm (with propeller and spinner - 1980 mm)

Wingspan - 1640 mm

Full weight of the airplane - about 5150 gr

The Equinox is designed for electric motors with either a twin propeller (contra drive system) or a single propeller.

This is a KIT set. The buyer needs to paste the stabiliser tube and paste small parts to make the



Components assembled in base white. I wish I had a flying site like that outside my house!



Rear view of the Equinox showing the pronounced fin for directional stability.

wing fastening. The main parts are included in the set. Small parts such as wheels, screws, nuts and rods are not included; it is the choice of each buyer. The model is exclusively painted only in the mould, which provides an exceptional and very

lasting painting quality. Such painting is not affected by aggressive environments, thinners, solvents etc. Each buyer can choose colour combinations according to the standard painting scheme provided."



Kit completed for a Swiss customer.

World Championships

Kevin Caton	Brandon Ransley	Malcolm Balfour
1995 Japan	1995 Japan	
1997 Poland		
1999 USA	1999 USA	
	2001 Ireland	
2005 France	2005 France	2003 Poland
2007 Argentina		
2009 Portugal		
2013 South Africa		
2015 Switzerland		
2019 Italy		
2023 Australia		

European Championships

Kevin Caton	Brandon Ransley	Malcolm Balfour
1996 Czechia	1996 Czechia	
1998 Italy	1998 Italy	
2000 Belgium	2000 Belgium	
	2002 Spain	
	2004 Portugal	
2006 Switzerland		
2010 Austria		
2012 France		
2014 Liechtenstein		
2016 Germany		
2022 Spain		2022 Spain
	2024 Belgium	2024 Belgium
2026 France	2026 France	2026 France

There are several examples of the RC-Composit produced Glacial biplane on the F3A circuit here in the UK and I have to say all of them are superb. The Equinox, with the pedigree of designers Poyet and Nowik, with construction by RC-Composit, promises to be a fantastic model to look out for in 2026.

UK TEAM NEWS

The 2026 European Championships will be held in Saint Macaire en Mauges, Sevremoine, France between 8th to 15th August (<https://ec-f3a-2026.com/home/>). Currently, seventeen nations are registered to attend this prestigious team event, which will be the 22nd event of its kind to be held in Europe.

The UK have already selected their team following a team trial event taken from the results of the BMFA Nationals event at Buckminster last year. Our team for 2026 will be Malcolm Balfour, Brandon Ransley and Kevin Caton. A list of their team accolades is shown nearby.

The reserve place was taken by Dan Workman and for this event the UK team manager will be Jim Fallowfield. This is a very experienced team and I have high hopes for their performance in the coming months. It is really great to see that each team member is currently sponsored by J. Perkins here in the UK providing Futaba radio control systems.

In the next edition I hope to shed more light on the increasingly popular automated flight scoring system FCScore, developed in part by UK pilots Tom David and Adrian Mansell. ■



UK Team for the European Championships. Clockwise from right: Brandon Ransley, Kevin Caton, Malcolm Balfour.



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FG Cowl Chin	CF3341AUX	£14.25
FG Cowl	CF3341CX	£37.05
Canopy	CA3341CY	£13.50

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P-47 THUNDERBOLT

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Additional Wood Pack	AWP2104	£126.35
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Razor Canopy	CA2104CY-R	£13.50
FG Cowl	CF2104CL	£19.95

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WARMER SKIES

As the new flying season gets underway, **David Ashby** clocks some early maiden flights, tests a clever ESC and notes a significant anniversary

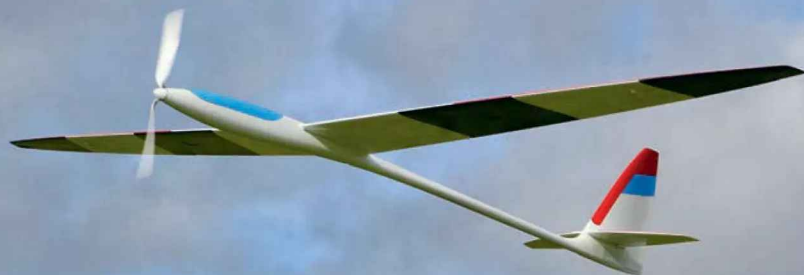
Words & Photos: **David Ashby**

Perhaps it's just me but the winter just gone seemed particularly tough. Low temperatures aren't the problem; I can still get out and fly when it's freezing and a crisp clear day can be quite invigorating. But those weeks of relentless rain were something else. Tradition has it that model flyers take to their sheds late November, emerging in the spring ready for the new season with the latest 'project', old models fettled and batteries cycled. But my hobby metabolism doesn't work like that. I need regular flying sessions to fuel the workbench creativity so I bash the balsa just as much if not more in the summer months as I do any other time of the year. Anyway, gloom aside, there are plenty of flyers who follow the traditional cycle and I've clocked a few new models completing their maiden flights this spring.



Relief after the Alpenbrise's first flight.

Dave Wray gives Dean Tilley's 4m Alpenbrise a heave for its maiden flight.



MAIDEN MODELS

Dean Tilley put some air under the wings of his Alpenbrise for the first time. Available in 4m and 5m span variants, this is the smaller version. Power is courtesy of a 4S LiPo feeding a Hacker A40-10S 1600kV outrunner spinning a 20" x 13" prop through a 6.7-1 gearbox. Despite using the heavier carbon reinforced layup, what surprised us was how noticeably light it was for its size, so launching didn't require gym membership. On the ground and in the air, this is a model with presence and the first flights made a big impression on those present. It cruised round effortlessly finding lift, threw in a few swishy passes, then came down for a composed crow-assisted landing. Hyperflight sell them in the UK and while, at first glance, 'cheap' isn't the word you'll reach for, 'quality will out' as they say, as it's undeniably a very lovely thing.

On the same day, John Goldsmith maidenied his 43" span Aermacchi 339 PSS glider built from the pull-out plan in the February 2000 issue of RCM&E. The prolific Cyril Carr



Dave Taylor prepares to launch John's '339.



Ray Wood's compact WOT4.

designed it for electric power, along with this glider version. John and his mate Dave Taylor regularly travel down from Essex to our Kent slope and a rare winter soiree over the border saw the 339's first flights. It looked good and flew really well, which is all you can ask for, and had several of us hankering after one.

My flying buddy, Ray Wood (the chap who designs for Model Boats magazine too) is a prolific builder and a 42" span WOT4 is one of several models to emerge from his workshop this spring. He reduced the 52" span original down to 42" and designed a built-up wing with ribs. An SC .25 two-stroke pulls it round nicely.

One new airframe that did emerge from my workroom last winter is a Blob glider built from the kit that's available at njrmodelling.co.uk. My slope flying experience doesn't go back to the days when, I'm told, the Blob was all the rage, but it's an SAS design and available as a pure glider or in an IC/electric powered version. The one-piece model has a ply fuselage and foam core veneered wings, so it's certainly robust, although my model seemed a tad heavy making me wonder how it would perform. I needn't ✈



It's a very pretty Cyril Carr design and the pull-out plan from RCM&E's Feb 2000 issue.



My Blob, 'a nice bit of slope machinery'!



PowerBox's iESC comes with a proper manual. A good thing too - none of that 'scan a QR code' nonsense.



It's well made but a tad taller than some ESCs.

have worried; it flies really well and doesn't hang about either. The roll rate keeps you on your toes, it signals lift nicely and slows down comfortably for landing. I'm really impressed. It's easy to see why it was so popular back in the day. You wouldn't exactly describe it as 'elegant', but a friend summed it up nicely as '*a fine piece of slope machinery*'. The glider version is £76.99 so provides a lot of fun for a modest outlay.

POWERBOX ESC

You'll probably know by now that I'm a happy Futaba radio user. But no system is perfect and I'm well aware that Futaba don't go in for some

of the bells and whistles other radio system offer. I've not come across anything to tempt me permanently away from the brand but some of the newer features out there seem very appealing, in particular electronic speed controllers that talk to transmitters without the need for separate sensors.

If you haven't noticed, ESCs have come on a bit over the last few years. You can still buy a standard 60 Amp 3 - 6 LiPo cell, 5V output job that can only be altered following a hit 'n' miss series of transmitter stick movements. And at £20 - £40 they're pretty cheap too. But you can also buy an ESC with its own 'smart ecosystem'

with one-wire telemetry obviating the need for separate sensors by providing voltage, current and current consumed info in real time straight to your Tx screen. Not forgetting 32-bit processors for smoother throttle response (I'm reading from the PowerBox brochure here...), HV support, built-in cooling fans and so on. Prices here are north of £120 and often quite a bit more.

Incidentally, I gave up on twiddling Tx sticks to programme my ESCs a long time ago and while LCD programming cards and boxes add £10 - 20 to the cost they're by far the easiest and quickest way to change ESC settings, especially on the more complex units.



Note the data port. A lead supplied uses this to connect to the Futaba receiver's S.Busz socket.

Knowing how much juice is left in the flight battery can be useful, even critical, especially when a new model's characteristics are being established or the power system's current demand is high, when flying an EDF jet for example. Futaba made the SBS-01C sensor for that very purpose although it has to be fitted inline between the ESC and battery. Finding one may be difficult though as it's now discontinued, making a telemetry equipped ESC attractive, especially where space is tight. PowerBox's iESC range caught my attention.

iESC 65.8

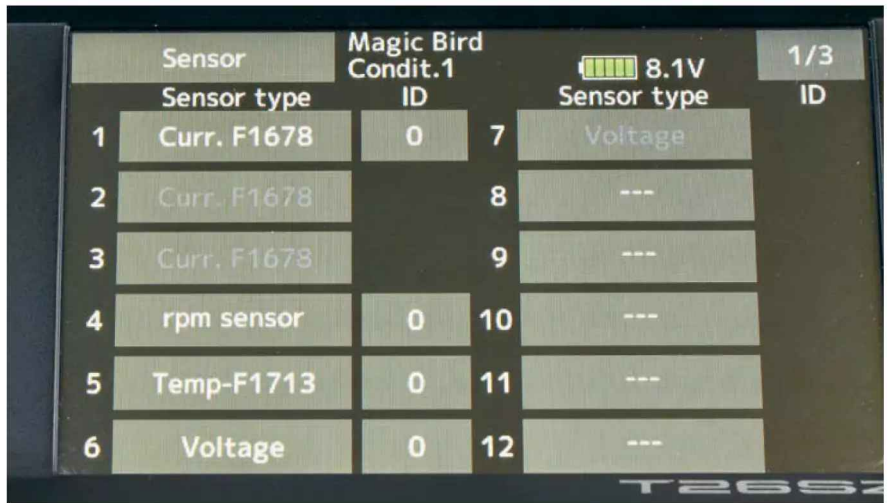
Their iESC is available in a number of sizes - 65A, 125A and 160A. I chose the smallest that's rated for up to 65A continuous or 75A peak. There's a selectable output voltage of 6V, 7.4V or 8.4V, it weighs 72g and operates with PowerBox, Jeti and Futaba radio telemetry systems. It'll operate purely as an ESC (without telemetry) with other radio brands. Measuring 60 x 36 mm it's about the same size as most other 60A ESCs but, at 20 mm deep, a bit taller, so may struggle to slip under a battery tray in, say, a slim glider fuselage.

First impressions are good. It's well made, exuding the quality feel you come to expect from PowerBox items, an XT60 plug and 3.5 mm bullet connectors are factory fitted, and a printed English/German instruction manual is there too.

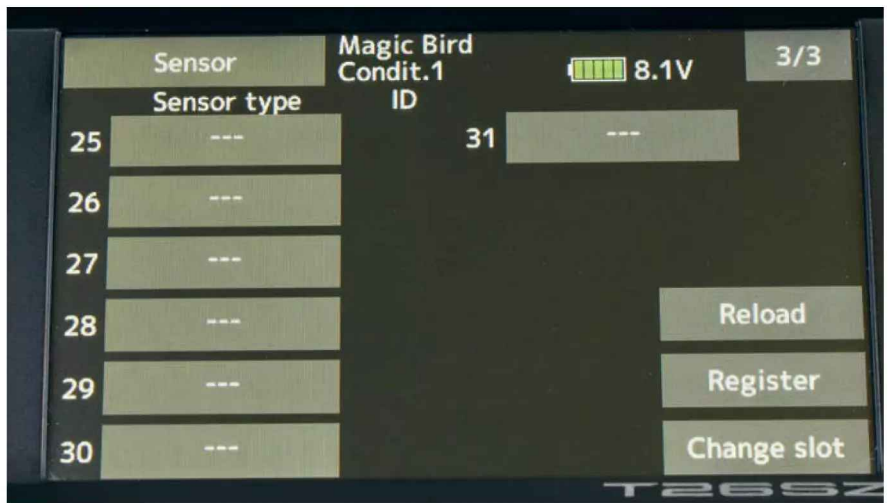
PowerBox Core and Jeti users can adjust the usual ESC settings via their transmitter menu options. Futaba users will need the iESC ProgramCard that uses a two-line LCD screen. A connection cable is included for that purpose and my Seagull Magic Bird sportster would be the test model. Initial ESC set-up was trouble free and although a little more information relating to some of the adjustable parameters would have been appreciated, the model's requirements were straightforward.

Telemetry function set-up was next. A separate lead links the ESC to the S.Busz socket on any compatible Futaba Rx, in my case a R3006SB using the T-FHSS protocol. The ESC's manual illustrates the sensor assignment list that should be set up at the Tx, then it's just a case of deciding how you'd like the information conveyed while setting alarms as necessary. The iESC 65.8 provides the following info:

- Flight battery voltage
- Real-time current
- Consumed battery capacity
- The motor's RPM
- Temperature of the ESC



Futaba sensor assignment.



Hit the 'reload' button on the third screen if some telemetry data lines fail to initialise.



The top screen on my T26SZ transmitter. From the top: consumed current, LiPo pack voltage and real time current draw.

My T26SZ transmitter has a sub-screen at the top that displays three telemetry items while these, and the other two, can be allocated to any switch for spoken updates.

Initially, I found that only the battery voltage and ESC temperature were reported. Checking everything over - connections, Tx settings etc. - didn't solve the matter, but tapping 'reload'

in the third page of the Linkage Sensor menu before reassigning the sensors did the trick.

IN USE

My Seagull Magic Bird uses a 4S 2700 mAh LiPo battery that, like most LiPos, usually registers 97% or so when the charger says it's done. A freshly charged pack went in



The programming box can also be used as a battery checker.

and I landed after the system reported I'd expended 1400 mA. The battery checker said 30% was left and 1623 mA went back in at the charger. Subsequent flights also reflected a 200 – 300 mA gap. Landing after 1576 mA had been expended reflected 14% on the battery checker and a very warm pack came out of the model. Current draw was always well within the ESCs rating and cell voltages were stable.

So, what did I learn? Well, we're not working with finely calibrated scientific instruments here, that much is obvious. Charging a LiPo battery is an inefficient process. And telemetry readings provide a guide that, together with a timer and knowledge of the LiPo's normal performance, should help estimate flight duration a little more accurately. It's another tool and a useful one, but not essential.

Incidentally, the ESC's ProgramCard (more of a box really) can also be used for checking LiPo batteries up to 8S size and on that subject we all know that little battery checkers only offer a ballpark estimation as to the pack capacity. And it's never a good idea to rely on one by having a second flight when, say, the checker tells you there's 40% remaining.



Members of the South Norfolk MFC enjoyed some excellent March weather for their Spitfire anniversary gathering (Ron Gray photo).



To mark the occasion, John Marchant brought along a chunk of early Spitfire prop (Ron Gray photo).



My Seagull Magic Bird has been the iESC's test model.



Brian Cooper got his Kyosho Spit' up at the Corby Club.



Brian's foam board FliteTest Spitfire.

SPITFIRE AT 90

If you hadn't been aware, March 5th, 2026, marked the 90th anniversary of prototype Spitfire K5054's first flight. Forumites at RCM&E's online home - modelflying.co.uk - couldn't let the occasion pass without a countrywide mass fly of models, all Spits of course. Thankfully the weather was kind in most places so pop across to the site, bung '90th Anniversary of the Spitfire' in the search box and you'll see what went on.

Blue skies in the East meant Ron Gray and members of the South Norfolk MFC had perfect 'summer 1940' weather for a fine turnout of models.



Bob decided to decorate his FliteTest Spit' in this attractive civilian scheme.

Up at Perth MFC, overcast skies didn't stop Brian Cullen and Bob Davidson flying 15 different Spitfires between them, a collection of just about every foamie or small balsa Spit you could think of, including a neat squadron of ultra micros. Naturally, the flight order started with the prototypes, followed by the Mk.1s, the Mk.IXs, the PRU versions, another Mk.IX and, finally, a civilian Spitfire.

Brian's K5054 is a 42" span FliteTest foamboard example into which a lot of work has gone. It's covered in laminating film (never again, said Brian) then sprayed using rattle-can silver for the cowling and control surfaces. Valspar matchpot acrylic paint simulates the zinc chromate of the metal surfaces. The markings are matt vinyl, the pilot and

spinner are 3D printed, as are the underwing radiator, oil cooler, air intake and tail skid. The prototype's distinctive canopy is vac-formed over a modified 3D printed mould.

Meanwhile, Brian Cooper got his Kyosho Spitfire up at Corby and District MAC and there were many others, big and small, that flew around the UK too. At the final count over 45 in fact. Daren Cogdon was the chap who came up with the idea on the forum so well done to him and everyone who joined in.

Much like the BMFA's world record mass fly in May 2022, events like this are a great way of bringing clubs and flyers together, so if a similar idea hits you then please do share it.

Oh, and mark 5th March 2036 on your calendar! ■



At the Perth Club, Brian Cullen and Bob Davidson flew this little lot between them. In mark order, of course (Brian Cullen photo).

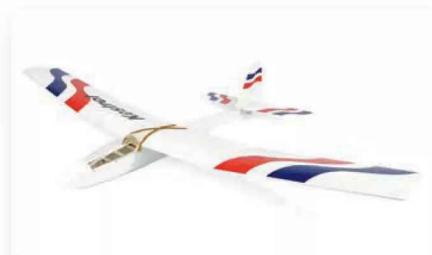


E-FLITE V1200

£549.99 (BNF) £519.99 (PNP) | www.logicrc.com

The fastest prop-driven E-flite model yet, a 4S 3200 – 5000 mAh LiPo and the factory-installed brushless power system will combine to project the V1200 to speeds of up to 110+ mph in level flight... make that 140+ mph on a 6S 3200 – 7000 mAh! Composite reinforced, the strong and stiff 1.2 m span EPO airframe is perfectly suited to withstanding such speeds and fast aerobatic manoeuvres. The Spektrum Avian 100A Smart ESC lets you know all is well with the power system and battery from real-time telemetry data sent via compatible receivers (such as the BNF Basic version's AR637TA+) to Spektrum AirWare-equipped transmitters. Six digital, metal-gearred servos

and ball-link equipped linkages provide a precise, locked-in feel, especially when flying the BNF Basic version as the AR637TA+ Rx features enhanced AS3X+ and optional-use SAFE Select technologies. Flaps improve slow-flight performance and allow for shorter take offs and landings, which are straightforward from paved, packed dirt or shorter grass surfaces at any suitably sized field thanks to durable and reliable retracts with sprung wire struts. Assembly is glue-free; six screws install the stabs and hands-free connections see the one-piece wing install and remove easily for convenient storage and transport.



DPR KESTREL

£69.99 – £99.99 | www.jperkins.com

Balsa built, beautifully covered and boasting a top-quality finish, DPR's 1520 mm span, 2-channel ARTF Kestrel is sure to find favour with beginners and old hands alike. A glider at heart, complete with a high-lift wing section, all that's needed to enjoy R/C flight in one of its purest forms is a hill and a gentle breeze. But for those who prefer some backup, or fly from the flat, the included motor-glider parts option will open that door. The balsa and ply ARTF airframe is 85% complete, along with the aforementioned motor-glider parts, plus hardware pack, spar and wing dowels, wing bands and instructions. If you'd prefer to spend more time at the building board then there's also a kit version, with laser-cut parts, quality balsa selection, full-size plan and building instructions.



DPR NAVIGATOR

£74.99 – £124.99 | www.jperkins.com

Providing all the prerequisites of a basic trainer, the 1500 mm span DPR Models Navigator is also capable of easing the aspiring R/C pilot through their first steps of aerobatic training, making it the ideal springboard to that first low winger. Recommended for a C3542-05 electric motor, 50A ESC and 3S 2200 mAh – 3700 mAh LiPo, this aileron equipped, 4-channel high-winger

is comfortable to fly in both calm and windy conditions and is easy to transport. The Navigator is available in two formats; if you're looking to get airborne as soon as possible then the ARTF, which presents high quality pre-built airframe components that assemble quickly, is the way to go. But for those wanting a more absorbing 'build and fly' experience, the trad' builders' kit contains high quality



laser-cut parts, balsa, ply, U/C and wheels, hardware pack, full-size plan and step-by-step building instructions.

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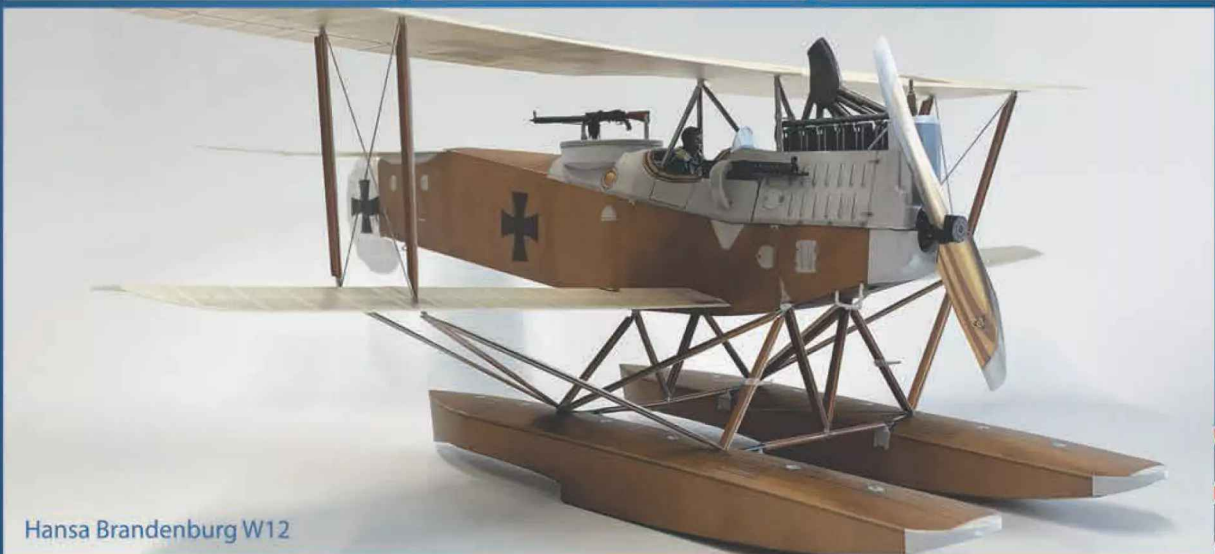
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Hansa Brandenburg W12



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Eratix is a pleasure to fly outdoors on a calm day or indoors in a decent size hall.



GETTING MY HAND IN

This month **Kevin Crozier** starts with an update on flying an agile indoor aerobat and comes over all hi-tech by updating a new transmitter

Words & Photos: **Kevin Crozier**

My review of the E-flite Eratix 3D Flat Foamy aerobatic model in the April issue came, by necessity, to a bit of an abrupt end. You may remember that I cited car trouble for arriving late at the last available indoor meeting before that issue went to print. So, I could only give you my briefest of impressions of the Eratix's indoor potential from the only flight that I had time for that evening.

However, since then I have flown her at two more indoor sessions in a four-court sports hall, racking up several flights. With each flight I feel that I'm getting more and more confident with this nimble little Extra look-a-like and so recent excursions around the venue have included multiple rolls (well, two to be honest, but I feel a triple is close), controlled loops (not just yanking in up and hoping for the best), as well as Harrier style circuits, intermingled with short spells of prop hanging.

It's still work in progress - for the pilot that is, not the model - and Eratix feels like it has plenty of performance available for me to



I'm brewing up to try three consecutive rolls the next time we go flying indoors!

“...my flying buddy, Steve, has recently started to fly a Klik 25 so I've come over a funny sort of green colour”

unlock. But I am really starting to feel much more comfortable when flying her. It's a world of difference, and a big step up in performance, from my previous indoor aerobatic models.

The only trouble is that my flying buddy, Steve, has recently started to fly a Klik 25 F3P model so I've come over a funny sort of green colour. I definitely want one of those!

RADIO UPDATE

I have a love/hate relationship with computers and the very mention of words like Update and Firmware are likely to give me goosebumps. Combine the two and it's a sure-fire recipe for a splitting headache and the feeling that I've wasted several minutes, if not hours, of my life. Such was the case recently when I attempted to upload two files to a recently reviewed Spektrum NX8+ transmitter.

It all started after I had set up a new model on this thoroughly modern Tx. To do this, I used my usual method of copying an existing model memory, renaming it and resetting all the →



Spektrum's NX8+ transmitter was easy to update with the latest firmware using WiFi.



When setting up the 1.1 metre span Sportix, I copied a previous model memory and also downloaded the BNF file from the Spektrum website so that I could compare AS3X settings for the two.



Best of three! After trying WiFi and microSD downloads, I think I'll stick to using the NX8's USB/charge lead for future file transfers. Simple and reliable!



I should have treated myself to a SanDisk branded microSD card to download files to the NX8+. My budget card didn't cut the mustard! It was a false economy, being only a couple of pounds cheaper.

trims and any other model specific functions. I do this mostly because I'm lazy but also because I like to have all my rates and expo settings for ailerons, elevator and rudder available on one three position switch on the right shoulder of my transmitters. I call this my Flight Mode switch and I set it up so that it replicates the low and high rates shown in the manual of any new model that I am going to fly, plus any associated expo settings. And if I fancy a little bit more movement than is recommended I can set a third 'hooligan' set of throws too, although I rarely find that I need to use them. Now, inputting three sets of rates and expos into a blank model memory is a bit of a faff, plus any additional settings that a new

model may need, hence my attraction to the Copy Model function. But with this particular model, which benefits from an 'always on' three axis gyro (although I have since found out how to make it switchable), I couldn't help shake the feeling that something wasn't quite working correctly. To be precise, the gyro was only giving tiny adjustments to each of the control surfaces.

The model in question was the Sportix 1.1m, one of Horizon Hobby's latest BNF (Bind 'N' Fly) aeroplanes, as was the model that I copied the set up from. In the original model the AS3X gyro causes quite large control surface changes when the aeroplane is handled. In fact, it looks quite 'twitchy'. But from my experience with AS3X

equipped models, going back many years, this is normal and I was expecting the new model to do the same. However, the servos in the Sportix were barely registering a murmur. Still, the controls were all working in the correct direction and, gyro aside, I had 'full and free' movement, so I was prepared to give it a go.

Roll on a couple of days whilst waiting for the weather to improve for the model's maiden flying session and I had second thoughts. As one of Spektrum's most recent radios it is possible to download pre-prepared set ups for most BNF models, many of which are already installed in the NX8+'s internal memory. And for new BNF models, like the Sportix, it's possible to import a

One of these smart moulded EPP cases will keep your NX series transmitter well protected. Fair warning - it's a bit on the large side!



fresh set up file. I wondered if such a file existed for the new model, which it did, so I thought that there would be no harm in trying Horizon's own set up and see if that increased the response from the gyro.

DOWNLOAD THREE WAYS

There are three ways to download files from the Spektrum website: using WiFi, a microSD card or via the USB/charge lead supplied with the transmitter.

Before downloading a new BNF file it is recommended to check for any updates to the Tx firmware. Our Tx was supplied at version 4.0 but a new version, 4.02.14, was found to be available after I had registered at <https://www.spektrumrc.com>. I decided to try downloading the new file using WiFi, which worked well, but to do so I had to input my log in details, so this involved trawling through the character set shown on the Tx display by rotating and pressing down on the scroll bar. This is a bit of a pain with any modern radio, not just this one, and is bad enough when inputting a couple of short words when naming a new model, let alone when inputting multiple letters and numbers to download files over WiFi. Anyway, by the end of the process I had managed to successfully update the transmitter's firmware, so my attention turned to downloading the Sportix BNF file.

I was reluctant to repeat all that scrolling again so this time I thought I would try using a microSD card and simply download the file to that from my laptop. Since the files are quite small, I reasoned that a small capacity card would be fine and, besides, 32 Gb is about as small as you can get these days, which would more than enough. I also reasoned that I didn't need an expensive card, so I made a 'Click & Collect' order from my local Argos for their cheapest microSD card, although it was still from a well-known manufacturer. After downloading the Sportix BNF file to the new card and checking that it was in the correct format (FAT32), I pushed the card into its slot in the base of the Tx. I should have known that something was not quite right as the start-up screen glitched when I switched the set on and when checking for the BNF file the NX8+ couldn't see it. I tried another couple of times and then decided that maybe I needed to reformat the card. So, I put it back in my PC's card reader and set it going to reformat at FAT32.

After a couple of minutes, I could see that this would take a long time so I thought I would try updating the transmitter using its USB/charge cable and accessing the internal memory using the USB Settings menu. This was much easier and allows you to treat the Tx's internal memory as a separate drive into which you can drag and drop any matching files that you have downloaded to your PC. I quickly found the Sportix BNF file in Downloads, dragged it into the BNF folder in internal memory, then moved it into the E-flite subfolder. I was a bit worried that the downloaded file was of a different file type to the BNF files already there, ending in .NSPM instead of .SPM, but a quick search online showed that an NX series Tx's can read both file types.

With the new BNF file safely installed I created a new model memory into which I downloaded the Sportix BNF settings using the Model Select function and was pleased to see the Sportix pop up on screen as a new model. Will it solve my concerns over the AS3X gyro's tame responses? I'll leave you to read the Sportix 1.1m review to find out...

SCROOGE BE GONE

Before I leave this subject, let's return to that unresponsive microSD card. As I say, I reformatted it to FAT32, although this was its default setting. But since I had already finished my file downloads, I simply tucked it back in its packet and will use it for something else since my PC reads it okay. For me, using the USB/charge lead is the way to go if I need to make any further updates to the NX8+ transmitter's files. However, I did find something of interest on the Spektrum website whilst trying the microSD approach, which I wish I had found before making my purchase. It could well have made all the difference, all for the sake of a couple of quid!

If you are using a SanDisk brand card, up to many Class 10 cards have been found to work; other brands have been tested and failed, some miserably, and some even that meet the size and class requirements.

Also...

...we suggest using a different SD card, and/or formatting the card and starting again. Sometimes a card will have a flaw that goes undetected until a file is written to it. The radio is more sensitive to errors on the card than a PC is.

So don't be a Scrooge. Treat yourself to a decent SanDisk microSD card if you want to make use of a Spektrum transmitter's card slot.

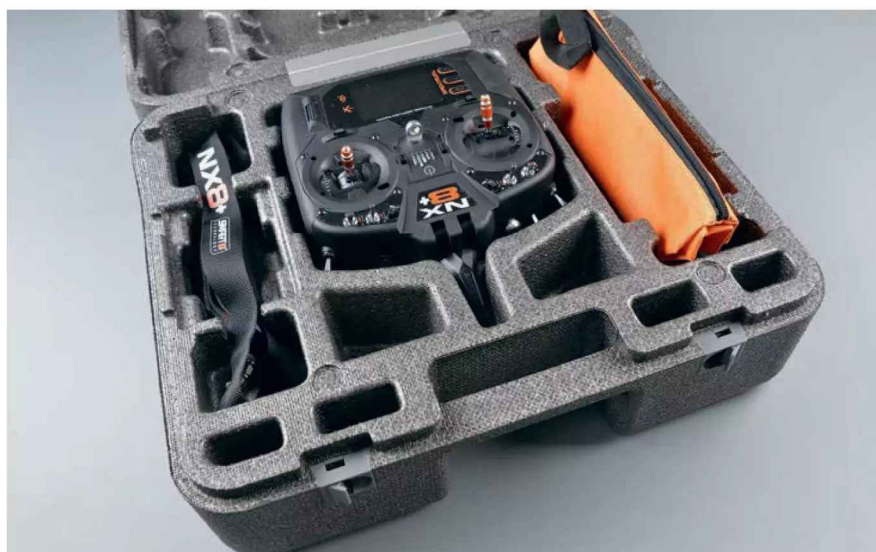
These statements are among the many helpful pieces of advice at Spektrum Wiki, the brand's support website. You can read more about NX file downloads here:

<https://wiki.spektrumrc.com/spektrum/how-to-update-nx-airware>

CASE SOLVED

Whilst on the subject of the new Spektrum NX8+ transmitter, I eventually got tired of taking it flying in a borrowed Tx case. I always use a case to protect my transmitters when travelling ✈️

NX series cases come with a handy, bright orange zippered case. I keep the NX neckstrap, charge lead and stick adjustment tool in mine.



Inside there is plenty of space alongside the Tx for tools, maybe a small charger and some other accessories.



Easy to operate plastic catches keep the lid firmly shut.

to the flying field and in this instance, I had got in the habit of ejecting my faithful DX8 from its case whenever I needed to use the NX8+ trannie. So, I decided it was high time to invest in a smart new case for the new Spektrum, plus I also wanted another case for the InterLink DX flight controller that came with the recently reviewed RealFlight Evolution R/C simulator. Designed in a similar style to a NX series transmitter, I reasoned that the controller could be stored in the same type of case as the XN8+.

A quick search of the Logic RC website, the UK distributor of Spektrum products, showed several options, including an attractive moulded EPP foam Tx case designed especially for NX6/8/10 radios, product code P-SPM6728. Reasonably priced at an SRP of £39.99 it offered a snug home for the NX8+ and has several recesses around the edges for spare receivers, servos and other R/C related accessories. There's even a bright orange zip-up tool pouch to keep a few essential flying field tools handy, in which I stored the Tx's USB/charge lead and the Allen key used for stick adjustments. And since the Tx compartment looked suitable for the InterLink sim controller too, I decided to go all in and order two NX cases.

Additionally, I decided that a couple of my original transmitter cases had seen better days, so I looked for a pair of new boxes to replace them at the same time. Several years ago, I acquired one of Logic RC's own brand Single Transmitter Cases, which has served me very well, so I was pleased to see that this metal edged case is still available, albeit updated to be slightly deeper to accommodate the latest transmitters with slightly longer stick units. These cases have two lockable catches and come with a shoulder strap. The latest version is priced at just £23.50 SRP, so I added two of those to my order. Inside, the case is foam lined, with a pre-cut space for a traditionally styled R/C transmitter. There are also several additional cutouts for spare receiver batteries and cables etc.

When the parcel arrived, I was a bit surprised to see how big the NX outer boxes were. They dwarfed the Logic RC boxes, inside of which, protected by bubble wrap sleeves, were the pair of metal edged Tx cases, just as I expected. The NX cases, however, are real whoppers, measuring approx. 43 x 36 x 17 cm. The Logic RC cases by comparison measure 34.5 x 23.5 x 12 cm and were very much as expected in terms of both their size and appearance.

Despite their size the NX cases are lovely examples of modern EPP foam mouldings. As promised the NX8+ transmitter was a perfect fit and its dense foam surroundings are sure to give it a high level of protection if the case was ever to find itself under a pile of models or modelling



If you prefer something more traditional to keep your expensive transmitter in, then one of Logic RC's metal edged cases would be a good choice.



Each Logic RC case comes with a pre-cut foam insert to suit most 'cuddle box' style transmitters.

accoutrements when in the back of my car. And, should the worst happen, and I were to drop it when rushing to the field, I have no doubt the Tx would escape unscathed.

However, sad to say, I was wrong in my assumption that the InterLink DX controller would also fit in the other case. When Spektrum say that this smart case is only for NX6, NX8 or NX10 transmitters they really mean it. The problem with the InterLink controller is that there's nowhere for the stiff USB lead that emanates from the aerial hole to go, so the lid won't shut at all. I could have taken a sharp knife to the internal tray but that would have been sacrilege. Instead, I placed the InterLink controller in one of the Logic RC cases and found it to be a perfect fit, the USB lead settling down nicely into the supportive but springy foam. Result!

FLY WING BELL 412

Coming soon will be a review of Fly Wing's gorgeous Bell 412 helicopter, pictured here on its maiden flight. This follows on from our review of

Fly Wing's Bell 206 JetRanger in the September and October issues last year.

Fly Wing helicopters benefit from drone style GPS control systems so they fly more like a modern quadcopter drone than a traditional R/C helicopter. This makes them much easier to fly and they will happily fly 'hands off', which I'd be very reluctant to do with a 'normal' R/C chopper, let alone one with a painted scale body set as fitted to Fly Wing's eye-catching replicas.

Although very impressed with the Bell 206, I was a little critical of its 'flat' flying characteristics when put into the circuit. A traditional helicopter will exhibit nicely banked turns when in forward flight but the Bell 206, as supplied, tends to 'skid' around turns, much like one of those scale micro helis that are popular at indoor flying venues. So, I was very interested to read the following letter from Francis Donaldson, who invested in a Fly Wing Bell 206 after reading our review:

'As a died-in-the-wool fixed wing R/C pilot, after reading the extensive two-part write up of the Fly



Despite being a NX series look-a-like the RealFlight Interlink DX simulator controller doesn't fit in the NX case. So, it's now stored in one of my spare Logic RC cases instead.

Wing Bell 206 GPS helicopter in the September and October editions of RCM&E, I was moved to dig deep into my modelling budget and ordered one. It sounded a far cry from the Micro Mold Lark, which was my only previous attempt at heli flying, back in the 1980s, which I never got close to mastering. The 206 has more than fulfilled my expectations and I'm really enjoying flying it!

I'm writing because the review mentioned a couple of issues which the reviewer didn't like—the rather automaton-like way that it flew when in GPS mode, with unrealistic flat turns, and the fact that when switching to '3D' mode for flying manually, the heli tended to drop suddenly. To counteract this, it had to be flown around with constant 'up' on the collective as the self-centering collective stick is zeroed for zero blade incidence. The reviewer found this became tiring on the fingers.

The good news is that my 206 came with the latest ACE type controller which comes set up with an 'attitude' mode replacing the 3D mode, in which the heli keeps height automatically with the

collective centred and, unlike in 3D mode, the gyros actively stabilise it about all three axes. Attitude mode provides balanced, banked turns in a most realistic fashion. The attitude mode is also a much safer bet than 3D as a means of recovering control of the model if the GPS signal is lost in flight. The 'Return To Home' switch position remains as a last resort!

As an added benefit, the ACE set-up does away with the previous version's gimmicky switchable automatic circles and figure of eight flight paths and instead uses the three-position switch to select three levels of sensitivity of the controls i.e. 'beginner' to 'expert'. For those wishing to fly it like a normal flybarless heli, it's still possible to set it up this way by changing a setting.

Either the guys at Fly Wing have taken RCM&E's comments to heart or 'great minds think alike'. Well done, Fly Wing!

After reading Francis' letter and doing a bit of research on-line, the ACE control system did indeed seem to offer far more scale like flying.

FLY WING HELI START PROCEDURE

- Flick all shoulder switches up, away from the pilot.
- Switch on the controller (transmitter).
- Plug in the helicopter's LiPo.
- Flight controller light goes Purple (Return To Home) because switch 3 is in the up, Home, position.
- Put switch 3 in middle GPS position and wait until flight controller light turns solid Green. This may take several seconds.
- Put both Tx sticks in bottom outer corners to unlock controller. Swashplate should now respond to stick movements.
- Move switch 1 from Stop to Run and main and tail rotors will start.

So, I contacted Fly Wing to see if we could upgrade our existing Bell 206. They quickly replied, but with another kind offer, this time to provide a Bell 412 for review that was already equipped with the ACE system.

After receiving the model, we had to wait several weeks for the lousy spring weather to dry up. But when it did, we were blessed with a sunny spring day with a gentle breeze, perfect for testing the new 412 and also to hand over the Bell 206 to my flying buddy and in-flight model photographer, Barry. He has long wanted to try an R/C heli and the JetRanger with its easy to fly 'hands off' flight characteristics would be ideal as his first model. The trouble is that we couldn't get either model to start and despite reading the instructions (or thinking we had!) we had to call it a day, with both models put back in the car unflown.

I had warned Barry that there was a specific start procedure for Fly Wing models, which I had covered in the Bell 206 review—and had promptly forgotten about since last flying her! A conventional drone will often start as soon as the Tx sticks are placed in their outmost bottom corners but with a Fly Wing heli this simply unlocks the controller. To get the rotors started it is necessary to flick the Stop/Run switch to Run, at which time the main and tail motors will start to turn. This may sound obvious but when you are conditioned to doing the 'sticks in the corners' routine and nothing happens then it's surprising how much time you can waste running around in circles, repeating the same start up errors time and time again!

Back at home I reread my comments about a similar series of aborted starts in our original Bell 206 review and quickly saw the error of my ways. The following day offered similar flying conditions so after work I headed to my local club field, went through the proper start procedure (listed nearby) and the Bell 412 rose smoothly into the air for her maiden flight, oblivious to all the hassles we had been through the previous day.

I've now copied the start list and taped it to the battery covers of both our Fly Wing transmitters so, fingers crossed, we won't get caught out again. If you have a Fly Wing helicopter then it might come in handy to attach a copy to your transmitter too! ■



Fly Wing Bell 412 on its maiden flight. Full review coming soon!

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.

APRIL

April 18-19

PSSA 'Fly for Fun' at The Great Orme, Llandudno, North Wales. Meet at the 'Tank Track' car park for pilots brief 10 am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OpID number. NOTE: This event WILL NOT BE RUN if the winds are from the East due to slope access limitations. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

April 19

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

April 25-26

BMFA Scale Indoor Nationals
Radio Control, Saturday 25th and Free Flight, Sunday 26th April. At Wolverhampton University, Walsall Sports Centre, WS1 3TA
For info contact Pete Fardell: peter@fardell.karoo.co.uk

MAY

May 2-3

BFFA Fun Fly Festival at BMFA Buckminster is open to any BMFA member, with newcomers particularly welcome. Enjoy two separate days of competitions, practice or instruction in fun fly competition flying. Classes for novice and expert fun flyers including the Foamy Class for standard, out the box foamies. Trophies awarded both days. £15 per pilot, per day (paid on the day) and camping available from the Buckminster office. More details at <https://funfly.bmfa.org/>. Please note that as this is a bank holiday weekend, only electric models please. Contact James Gordon on 07966 439835 or email jamesrg@hotmail.com

May 10

White Sheet Radio Flying Club Scale Event. Back up date 31st May. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>

May 16

Bickley MFC Open Boot at Bickley MFC, Church Road, Sutton at Hone, Dartford, Kent, DA4 9EX. Gates open 9:00 am for 9:30 am start. Boot sale for all your modelling bits and pieces. Also, a perfect place to grab a bargain! Non-club members £5 to sell. Toilet on site. Camping must be pre-booked at admin@bickleymfc.org or visit <https://bickleymfc.org/>. For more information contact James Gordon on 07966 439835.

May 17

Bickley MFC Open Scale Day, at Bickley MFC, Church Road, Sutton at Hone, Dartford, Kent, DA4 9EX. Open from 10.30 am - 17.00 pm (note earlier date for 2026). Scale models of all types welcome, flying or static! Informal, relaxed scale fly-in, open to any BMFA member and includes a lunchtime barbecue. Toilet on site and camping available if booked in advance at admin@bickleymfc.org or visit <https://bickleymfc.org/>. For more information contact James Gordon on 07966 439835.

May 16-17

PSSA 'Fly for Fun' event at The Great Orme, Llandudno, North Wales. Meet at the 'Tank Track' car park for pilots brief 10 am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OpID number. NOTE: This event WILL NOT BE RUN if the winds are from the East due to slope access limitations. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

May 17

Power Scale Soaring at Hole of Horcum, Pickering, North Yorkshire, YO18 7NR. A fun day for all R/C model PSS gliders. BMFA membership required. £5 for non-club members. Location What3Words - snowmen.ordinary.caps. Lat -54.332235. Lon -0.690234. Due to MOD restrictions, please contact beforehand for details. For more information call 07747 614074 or email michaelkitchen@me.com or call 07796 364738 or email jonedison@btinternet.com.

May 24

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

May 30-31

Model Air Mayfly at BMFA Buckminster will be a fly-in with as many of the modelling disciplines and attractions there used to be at Old Warden including R/C flying, C/L flying, F/F & Radio Assist, Tethered Cars, Drone Racing, Camping. Excellent cafe. Pricing for pilots is £10 per person per day. Spectators £5 per person per day. To trade or car boot at the event please use the form at: <https://modelair.info/contact-us/>
Car Booters will be charged £5 per pitch, Traders are free. R/C flying will take place from 10:30 am to 4:30 pm each day. All types welcome but unfortunately no gas turbines. 15 kg weight limit. A B-Certificate is required or an A-certificate for slow vintage types. Models must be flown on 2.4 GHz only. Free Flight and Radio Assist flying will take place twice per day, from early morning until 10:30 am. The second session is 4:30 pm into the evening, 500 g weight limit, with a max. engine capacity of 0.8 cc or 100 W. Radio Assist 2.4 GHz only. BMFA membership required. For more information contact oldwarden@gmail.com or phone 07966 439835 (evenings and weekends only). Camping available; please enquire at BMFA Buckminster: <https://nationalcentre.bmfa.uk>

JUNE

June 6

Truro RC Model Flying Club is hosting the Truro RES gliding day competition events of the South West Area at their Trendeal field, near Ladock, Cornwall. 2 miles off the A3058. Qualified BMFA members only but spectators very welcome. Use the BMFA Truro & District Model Flying club website via the 'Locate Us' map for details, plus confirmation of dates and start times if reserve days for bad weather is forecast.

June 14

Bickley MFC Avicraft/Fun Fly Competition Open Day, at Bickley MFC, Church Road, Sutton at Hone, Dartford, Kent,

DA4 9EX. From 10:30 am - 17:00 pm. One of our most popular events of the year. A light-hearted competition day with your favourite club style Fun Fly competitions plus a few new ones! Open to any BMFA member and any club sport models or Fun Fly models welcome to join in the fun. Event and prizes supported by the London and Southeast BMFA areas, Avicraft and the British Fun Fly Association. Toilet on site and camping available if booked in advance at admin@bickleymfc.org or visit <https://bickleymfc.org/>. For more information, contact James Gordon on 07966 439835.

June 14

White Sheet Radio Flying Club Scale Event. Back up date 28th June. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>

June 19

Weston Park Air Show at Weston-under-Lizard, Shifnal, TF11 8LE. Gates open each day at 8:00 am, show starts at 10:00 am and ends at 17:30 pm. Saturday evening dusk show starts at 20:30 pm and ends at 23:00 pm. In its 29th year, Weston Park is a beloved family-run event in Staffordshire. Offering a unique experience, the camping price includes full access to the show and park. However, please note that disabled camping spots are limited, so it is important to inform the gate staff upon arrival. Weston Park is a family run event and is fun for all the family. Enjoy the show in your caravan, motor home or tent and as an added bonus children under 16 go free for 2026.

June 21

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

JULY

July 1-5

PSSA 'Fly for Fun' event with the Lleyn MAC at Nr Abersoch, North Wales. Meet at the SPAR car park in Llanbedrog for 09:30 am each day (only applicable 4th/5th July). A slope map will be left in shop window for late arrivals. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OpID number. A daily flying charge will be payable at certain flying sites. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

July 10-18

FAI 2026 World Scale Championships
At BMFA Buckminster, located on the Leicestershire/Lincolnshire border close to the towns of Melton Mowbray and Grantham, UK. The site hosts the National Visitor Centre and Model Flying site of the British Model Flying Association (BMFA). For more information visit: info@worldscale26.bmfa.uk

July 12

White Sheet Radio Flying Club Scale Event. Back up date 26th July. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>



July 19

Classic Glider at Hole of Horcum, Pickering, North Yorkshire, YO18 7NR. A fun day for all R/C model PSS gliders. BMFA membership required. £5 for non-club members. Location What3Words - snowmen.ordinary.caps. Lat -54.332235. Lon -0.690234. Due to MOD restrictions, please contact beforehand for details. For more information call 07747 614074 or email michaelkitchen@me.com or call 07796 364738 or email jonedison@btinternet.com.

July 19

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

July 19

Cocklebarrow Vintage Rally at Aldsworth, Glos, on the B4425 between Cirencester/Burford and off the A40 between Northleach and Burford. What Three Words: positives.arrival.calculate. All model types to 1975. BMFA membership required for flyers Contact Peter Marsh on 07831 193091, email: pjtw@msn.com, or Paul Howey on 07405164040, email: G4BBP@aol.com. For more information call 07747 614074 or email michaelkitchen@me.com or call 07796 364738 or email jonedison@btinternet.com.

July 26

Bickley MFC Open Ducted Fan & EDF Day at Bickley MFC, Church Road, Sutton at Hone, Dartford, Kent, DA4 9EX. From 10:30 am - 17:00 pm. A popular open day for EDF and Ducted Fans of all types. Also, some fun competitions for those who want to take part. Open to all BMFA members but sorry no turbines. Toilet on site. Camping available if booked in advance at admin@bickleymfc.org. For more information visit <https://bickleymfc.org/> or James Gordon on 07966 439835.

AUGUST

Aug 1-2

PSSA 'Fly for Fun' event at The White Horse, Westbury, Wiltshire. Meet at the White Horse car park (location link below). Pilots brief at slope location at 10:30 am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OplD number. Note this meeting will only run with locally forecast winds from West through to North. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

Aug 2

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

Aug 9

White Sheet Radio Flying Club Scale Event. Back up date 30th August. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>

Aug 15-16

British Fun Fly Association's Fun Fly National Championships at BMFA Buckminster. Open to any BMFA member with an A certificate and newcomers are very welcome! Classes 1, 2 and 3 including the Foamy Sub Class will be flown. Take part in up to two classes for no extra fee. Briefing at 9 am both days. Rules and entry forms at <https://funfly.bmfa.org/>. £30 entry fee for the

weekend (paid on the day). Juniors FREE! Camping available from the Buckminster office. More details at <https://funfly.bmfa.org/>. Contact James Gordon on 07966 439835 or email jamesrg@hotmail.com

Aug 15-16

PSSA Fly-In at The Bwlch, Nant-y-Moel, Bridgend, South Wales. Kindly supported by the SWSA: <http://a470soaring.blogspot.co.uk/>. Meet at the 'Ice-Cream' car park for 10 am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OplD number. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

August 16

Cocklebarrow Vintage Rally. All model types to 1975. BMFA membership required for flyers. Aldsworth, Glos, on the B4425 between Cirencester/Burford and off the A40 between Northleach and Burford. What Three Words: positives.arrival.calculate. Contact Peter Marsh on 07831 193091, email: pjtw@msn.com, or Paul Howey on 07405 164040, email: G4BBP@aol.com

Aug 22 - 23

White Sheet Radio Flying Club F3F English Open. For more information visit <https://whitesheet.bmfa.club/>

Aug 29

Bickley MFC Open Boot Sale at Bickley MFC, Church Road, Sutton at Hone, Dartford, Kent, DA4 9EX. Boot sale for all your modelling bits and pieces. Also, a perfect place to grab a bargain! Non club members £5 to sell. Toilet on site. Camping must be pre-booked at admin@bickleymfc.org. For more information please visit <https://bickleymfc.org/> or contact James Gordon on 07966 439835

Aug 30

Bickley MFC Open Glider Fly-In, 10.30 - 17.00. All types of gliders are welcome, including DLG, F5j, foam gliders, GPS gliders, FxRES, aero tow or anything else we haven't thought of! It will be a very informal event and an opportunity to see as many different glider types as we can. Please note 400 ft height limit for models over 7.5 kg. Toilet on site. Camping must be pre-booked at admin@bickleymfc.org. For more information, please visit <https://bickleymfc.org/> or contact James Gordon on 07966 439835

SEPTEMBER

Sept 5

Truro RC Model Flying Club is hosting the Truro RES gliding day competition events of the South West Area at their Trendeal field, near Ladock, Cornwall. 2 miles off the A3058. Qualified BMFA members only but spectators very welcome. Use the BMFA Truro & District Model Flying club website via the 'Locate Us' map for details plus confirmation of dates and start times if reserve days for bad weather is forecast.

Sept 5 - 6

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

Sept 6

White Sheet Radio Flying Club Scale Event. Back up date 27th Sept. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>

Sept 6

Basingstoke MAC 21st Electric Fly-In. Gates open 9:00 am with a pilots' briefing 10:00 am and then the fun starts. Free entry, BBQ, hot & cold drinks plus an on site loo, but we hope to get you to buy some raffle tickets. BMFA proof of insurance required, location and contact details at bmaccclub/events or [@basingstokemacon](https://www.facebook.com/basingstokemacon) on Facebook.

Sept 13

Scale Gliders at Hole of Horcum, Pickering, North Yorkshire, YO18 7NR. A fun day for all R/C model PSS gliders BMFA membership required. £5 for non-club members. Location What3Words - snowmen.ordinary.caps. Lat -54.332235. Lon -0.690234. Due to MOD restrictions, please contact beforehand for details. For more information call 07747 614074 or email michaelkitchen@me.com or call 07796 364738 or email jonedison@btinternet.com.

Sept 19 - 20

PSSA 40th Anniversary Mass Build event at The Great Orme, Llandudno, North Wales. Meet at the 'Tank Track' car park for pilots brief 10 am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OplD number. This event will stage the Harvard/AT-6 Texan Mass Build event marking the Association's 40th Anniversary. For more information contact Phil Cooke on 07772224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

Sept 20

Cocklebarrow Vintage Rally. All model types to 1975. BMFA membership required for flyers. Aldsworth, Glos, on the B4425 between Cirencester/Burford and off the A40 between Northleach and Burford. What Three Words: positives.arrival.calculate. Contact Peter Marsh on 07831 193091, email: pjtw@msn.com, or Paul Howey on 07405164040, email: G4BBP@aol.com

Sept 20

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

OCTOBER

Oct 4

White Sheet Radio Flying Club Open Slopes. For more information visit <https://whitesheet.bmfa.club/>

Oct 11

White Sheet Radio Flying Club Scale Event. Back up date 18th October. Weather call will be the Friday before. For more information visit <https://whitesheet.bmfa.club/>

Oct 17-18

PSSA 'Fly for Fun' event at The Great Orme, Llandudno, North Wales. Meet at the 'Tank Track' car park for pilots brief 10am each day. Proof of BMFA (or equivalent) Insurance and Pilot Competency certificate required. All models to be fitted with compliant CAA OplD number. For more information contact Phil Cooke on 07772 224719, email webmaster@pssaonline.co.uk or visit <https://www.pssaonline.co.uk/about-us/events/>

Oct 25

White Sheet Radio Flying Club F3F. For more information visit <https://whitesheet.bmfa.club/>

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BEECH CRAFT D17 stagger wing, unstarted scale biplane project. Complete kit, aluminium cowling, plans and all balsa parts, 1422 mm wingspan, rare kit - £275 plus P&P. Call Rob on 07791 268498 (Telford).

HOBY CAT GLIDER ready to fly, very rare, made by the makers of Hoby Cats full sized catamaran sailing boats. Never seen another. Polystyrene protection box. Photos available - offers? 07718 464066 (Poole).

RUDDER BUG vintage electric plane, outrunner motor, red and white by engineer. Photos available. Several beautiful seaplanes, all electric and with 4ft span - offers? 07718 464066 (Poole).

MAXTHRUST V2 electric aircraft, never built or flown. Battery included, 140 cm wingspan. A lot of aeroplane - £240. Call Adrian on 07593 364486 (Bucks).

HIROBO SHUTTLE PLUS 95% built, Irvine 36H, Sanwa R06000 Sport 35 MHz. Everything included to finish. Field box, power panel, training undercarriage, head loaders, instructions and manuals. All new and unused - £120. Buyer to collect. Call Mick on 07539 572200 (Kent).

ADVANCED SCALE MODELS, C-130 100" Hercules and B-17G 100" Flying Fortress. Both still boxed and untouched - £300 ono. 07947 822794 (Oxon).

HOBBY HORIZON CARBON CUB S2 1.3m BNF scale. Bush Trainer new with AS3X safe, 3s LiPos, manual and box fittings included for optional floats. Never flown, was £299 new with LiPo battery. Will sell for - £250. Call Paul on 07778 034316 (Walsall).

RC SKYLARK, 6' wingspan and 4'8" Dolphin gliders. Transmitter, receiver, battery, charger plus many other extras including motors, propellers and assorted wiring. Great for inspiring beginners - £100. 07951 454003. (Cheltenham).

T-7A RED HAWK 64mm EDF Kit, New in box, 960mm length, span 750mm with a lovely finish to surface of foam. Will operate from grass. Call for photos - £85 P&P £5.95. 07946 414532 (Yorks).

NEW KITS, Flightline Bearcat - £220. FMS 70mm Advanti - £220. FMS J-10 Vigorous Dragon Grey - £150. FMS Corsair 800mm - £100. Arrows 50mm Viper - £100. Kavan Twin Sarik Glider - £220. X-Fly Twin 40mm F18 - £100. Buyer to collect. 01763 663016 (Herts).

ARMSTRONG WHITWORTH WHITLEY 48" complete with 2 motors, 2 speed controllers and servos. In as new condition - £160 ono. Hawker Typhoon 48" complete with motor, speed controller and servos - £120 ono. 01242 680659 (Cheltenham).

MODEL CANTABRIAN high-wing, completed ARTF from 10 years ago. Flown once and then stored. Sanwa controller with buddy box etc. - £100 for all. Call Pete on 07759 874916 (Kent).

SOARERS, 1980 Wildflecken 144" kit, built 1990 'Proton' 136", ailerons, flown a little but undamaged, well stored, both GF fuselages, servos, towline releases and accessories complete - £ free with a charity donation. Buyer to collect. Email Christopher on cjm@flyskipper.com or call 07950 467485 (Kent).

FREEWING Grippen 80mm fan R/C model - £200. Freewing F-16 70mm fan R/C model - £150. Freewing Hawk 70mm fan R/C model - £200. FMS F18 70mm fan R/C model - £200. All kits are complete and unassembled as new. Buyer to collect. 01763 663016 (Herts).

RADIO CONTROL MODEL KITS, as new and not assembled. FMS Advanti, ducted fan - £200. FMS J10 ducted fan - £150. FMS Corsair, prop, £100. Flightline Bearcat, prop, £200. Arrows Viper, ducted fan - £100. X Fly F18 twin, ducted fan - £100. Kavan Shark, powered glider - £220. Buyer to collect. 01763 663016 (Herts).

RADIO CONTROLLED MODEL AIRCRAFT by David Boddington 2004, two unopened 1-72 scale Airfix Vulcan kits. XM607, series A5005 Falklands war, includes paint brush, series 09002 XH562 - offers plus P&P. Call Andrew on 01989 564932 (after 5pm).

OS GGT 15 gas/glow engine, new - £245. Call Julian on 07934 531930 (Cams).

UNIQUE PRAZISE MODELBAU R/C, all aluminium Hornet kit. Beautiful kit from some years ago and will need careful building - £300 ono. 07718 464066 (Dorset).

WANTED

GOLDBERG JUNG MANN kit, in box. Great Planes Super Skybolt ARTF in any condition. Great Planes Shoe String, fibreglass version. Top prices plus postage paid! Call Conor on 08573 17939 (Dublin).

DRC GLIDER WINCH. Also, RES 2m span lightweight glider. Prefer pod and loom. Pick up available in Cornwall or Deven, otherwise RM at cost. Call Allan on 07840 423893 or email allanglover2@yahoo.ca

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

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

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

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Next issue

HORNET MOTH PRO-PLAN

During a recent winter, Graham McAllister was looking at the Tinker biplane plan by David Boddington. He liked the idea of building a simple cabin biplane for easy flying but thought it wouldn't be hard to build a sport scale cabin biplane in a similar manner. The DH.87 Hornet Moth came to mind with its boxy cabin and lovely de Havilland nose and tail. Things escalated and the result is a simple enough build and flies like a three-channel vintage model. With a wingspan of 134 cm (52.5"), construction is conventional balsa and lite ply covered with heat shrink film. Graham considered using a 0.45 four stroke engine but decided to stay with electric, however the option is there to make it an IC model and get that lovely four-stroke sound.



RCME
JUNE 2026
Issue on sale
15th May

WINGTIP WAFTERS

Elster Jet display pilots Ralph Losemann and Enrico Thäter are regular visitors to Weston Park with their impressive vectored thrust jets. For the 2025 show they brought along a couple of own design 1:4.5 scale, 2.2 metre span Chengdu J-10 jets, each powered by a JetCat P-250 Pro turbine. The vectored thrust nozzles allow for some amazing aerial antics but the lack of airflow over the ailerons in a vertical hover or high alpha pass means it is sometimes difficult for them to choreograph synchronised manoeuvres. To try and improve the roll control of their models whilst hovering they started experimenting with wing tip mounted thrusters using electric motors and props. Join Mike Freeman as he takes a closer look at these curious wing tip appendages



SPORTY SPORTIX

Designed to be a great looking and handling sport model, E-flite's Sportix 1.1m certainly fulfilled its brief when we put it to the test. Capable of smooth and predictable sport flying, it can even perform 'pattern-style' precision aerobatics. The model's convenient size, with a wingspan of just over a metre, makes it easy to store and transport, especially with its plug-in wings with no visible extension leads. Yet it's still big enough to fly well in windy conditions, especially the BNF Basic version on review that's equipped with AS3X+ technology that smooths out the worse effects of any wind and turbulence. It's rapidly becoming our 'go to' model to slot in beside a couple of less compact aircraft during our regular trips to the flying field.

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PARTING SHOT



Fabulous Phantoms

Let's wrap this issue up with some evocative images of the CARF-Models F4 Phantom II models flown at JetPower 2025, as captured through the lenses of Thorsten and Fynn Häs.

The CARF-Models F4 Phantom II is a 1:4.5 scale, extremely detailed replica of the iconic McDonnell Douglas F-4 Phantom fighter. It has a wingspan of 2.64 metres and a dry

weight of 37 to 40 kg. Using two 235-260N jet turbines gives the CARF F4 nearly the same weight-to-thrust ratio that the real aeroplane has. It uses a finely detailed all-composite construction and even though the base model is painted white or silver in the moulds, it can be ordered individually in any scale colour scheme that a customer may have in mind.

DATAFILE

Camera:	Canon R6m2
Lens:	RF100-500 mm, F4.5-7.1 L IS USM
Aperture:	f/9
Shutter Speed:	1/1000 sec
Exposure Mode:	Aperture priority
Focal Length:	500 mm
ISO:	160
Metering:	Pattern



PUSHING THE LIMITS

MATRIX 2.2

WITH ELECTRIC RETRACTS

Pink/Black (07)
SKU: PIL874



Composite construction

Green/Black (08)
SKU: PIL875



Composite construction

SPECIFICATION:

Fuselage: 2.2m (87in) | Wingspan: 2m (78in)

Turbine Required: 100-140N for Sport Flying | 160-180N for 3D Vector Flight

£3049.95

MATRIX 2.2

WITH ELECTRIC RETRACTS & VECTOR TAIL PIPE

Red/Black (09)
SKU: PIL876



Composite construction

SPECIFICATION:

Fuselage: 2.2m (87in) | Wingspan: 2m (78in)

Turbine Required: 160-180N for 3D Vector Flight

£3249.90

MATRIX 1.8

WITH ELECTRIC RETRACTS

SPECIAL OFFER

Orange/Yellow (02)
SKU: PIL783



Composite construction

10% OFF

Red/Silver (04)
SKU: PIL785



Composite construction

SPECIFICATION:

Fuselage: 1.84m (72.6in) | Wingspan: 1.74m (68.5in)

Turbine Required: 60-100N for Sport Flying

WAS: £2399.95 NOW: £2159.95

F-16 FALCON

WITH ELECTRIC RETRACTS



Composite construction

Scheme 01
SKU: PIL805

SPECIFICATION:

Fuselage: 2.5m (97in) | Wingspan: 1.6m (64in)

Turbine Required: 120-220N

£4399.95

PREDATOR V2

WITH ELECTRIC RETRACTS

Pink/Silver (31)
SKU: PIL863



Composite construction

SPECIFICATION:

Fuselage: 2.28m (90in) | Wingspan: 2m (81in)

Turbine Required: 80-160N for sport flying
180-260N for 3D vector flight

£2599.95

VIPERJET V2

WITH ELECTRIC RETRACTS

Blue/Green (13)
SKU: PIL846



Composite construction

SPECIFICATION:

Fuselage: 2m (78in) | Wingspan: 2.2m (87in)

Turbine Required: 80-140N

£2799.95

DOLPHIN V2

WITH ELECTRIC RETRACTS

Red/White (04)
SKU: PIL247



Carbon infused wood construction

TRAINER

SPECIFICATION:

Fuselage: 1.8m (71in) | Wingspan: 1.85m (72in)

Turbine Required: 60N

£1199.95

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Supermarine Spitfire Mk. IX



The XFly Spitfire Mk.IX "Spirit of Kent" is a scale replica of one of the most iconic fighters of World War II, featuring a 1200mm wingspan and durable EPO foam construction, finished in an authentic matte scale livery inspired by the celebrated Spirit of Kent aircraft, named in honour of the county that played a vital role in Britain's aerial defence. XFly captures the elegant, timeless lines of the Spitfire Mk.IX with a high level of scale realism, including a 4-blade propeller, accurately profiled canopy, detailed pilot figure, exhaust stacks, wing cannons, and outward-retracting landing gear. Designed to impress both in the air and on the ground, this version delivers a true warbird presence worthy of its historic inspiration.



FEATURES:

- High power 3541-KV745 motor and 40A brushless ESC offering outstanding thrust
- Electric retractable landing gear with shock absorbing struts
- Large battery hatch for easy placement of the battery and radio equipment
- Available in Green D-Day invasion version and Brown desert version
- Scale four panel split flaps for easier takeoffs and landings
- LED wingtip lights for added visibility and realism
- Scale 4-blade propeller

SPECIFICATIONS:

- Length: 1010mm/39.8"
- Wingspan: 1200mm/47"
- ESC: 40A
- Flying Weight: 1350g
- Wing area: 22dm²
- Motor: 3541-KV745
- Propeller Size: 11x7" 4-blade
- Servos: 9g servos x 6
- Recommended Battery: 4S 2600-4000mAh
- Radio: 6CH- aileron, elevator, throttle, rudder, retract, flaps
- Skill Level: Intermediate
- Requires: Radio, battery and charger to complete



Part number XF123P-S - 1:2M SPITFIRE MK.IX 'SPIRIT OF KENT' W/O TX/RX/BATT

RRP: £299.99



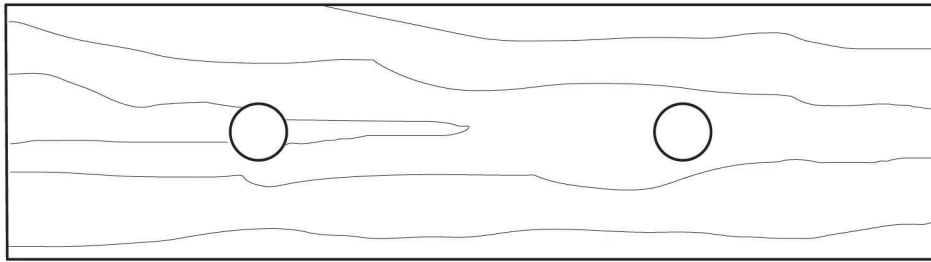
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XFLY-MODEL

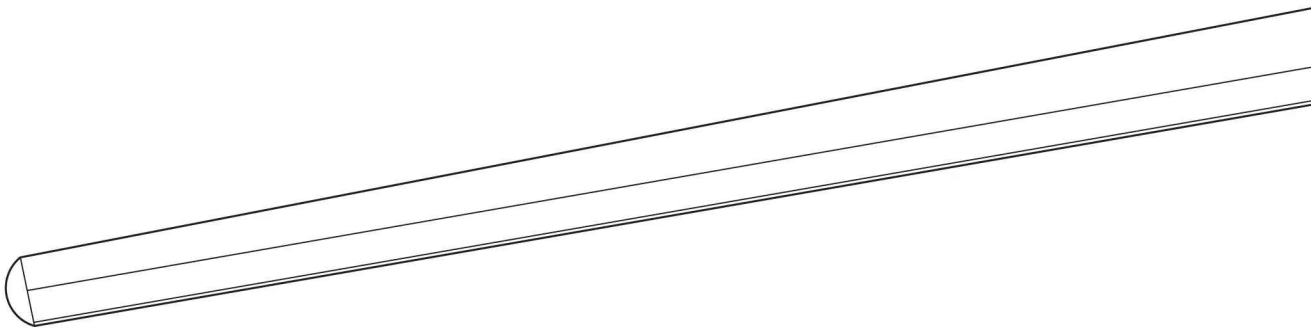
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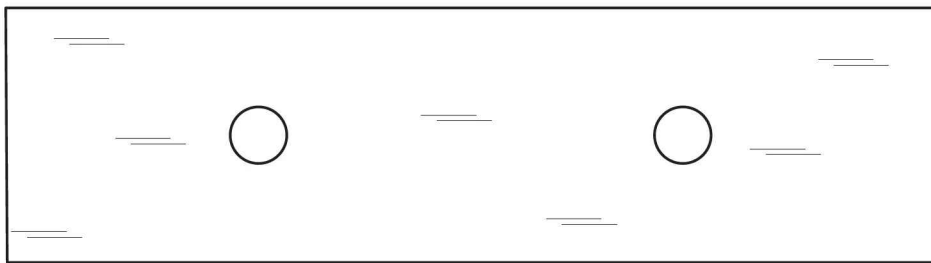
500



3mm MARINE PLY WING BOLT PLATE (UPPER)



400

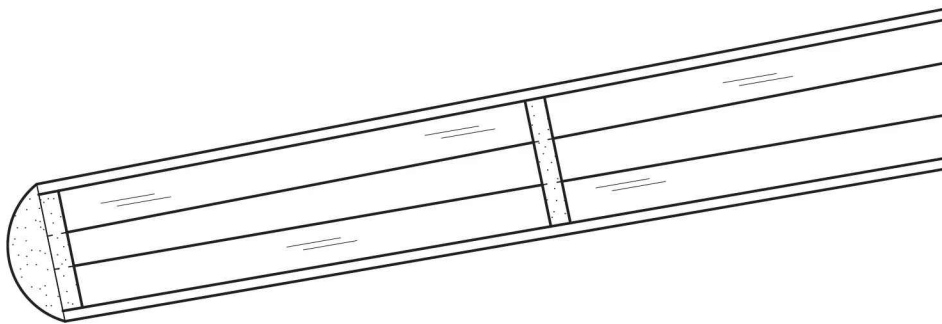


6mm HARD Balsa WING BOLT PLATE (LOWER)

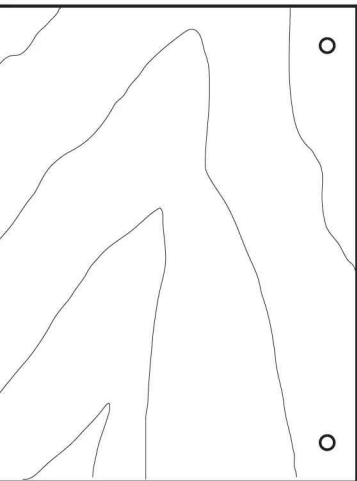
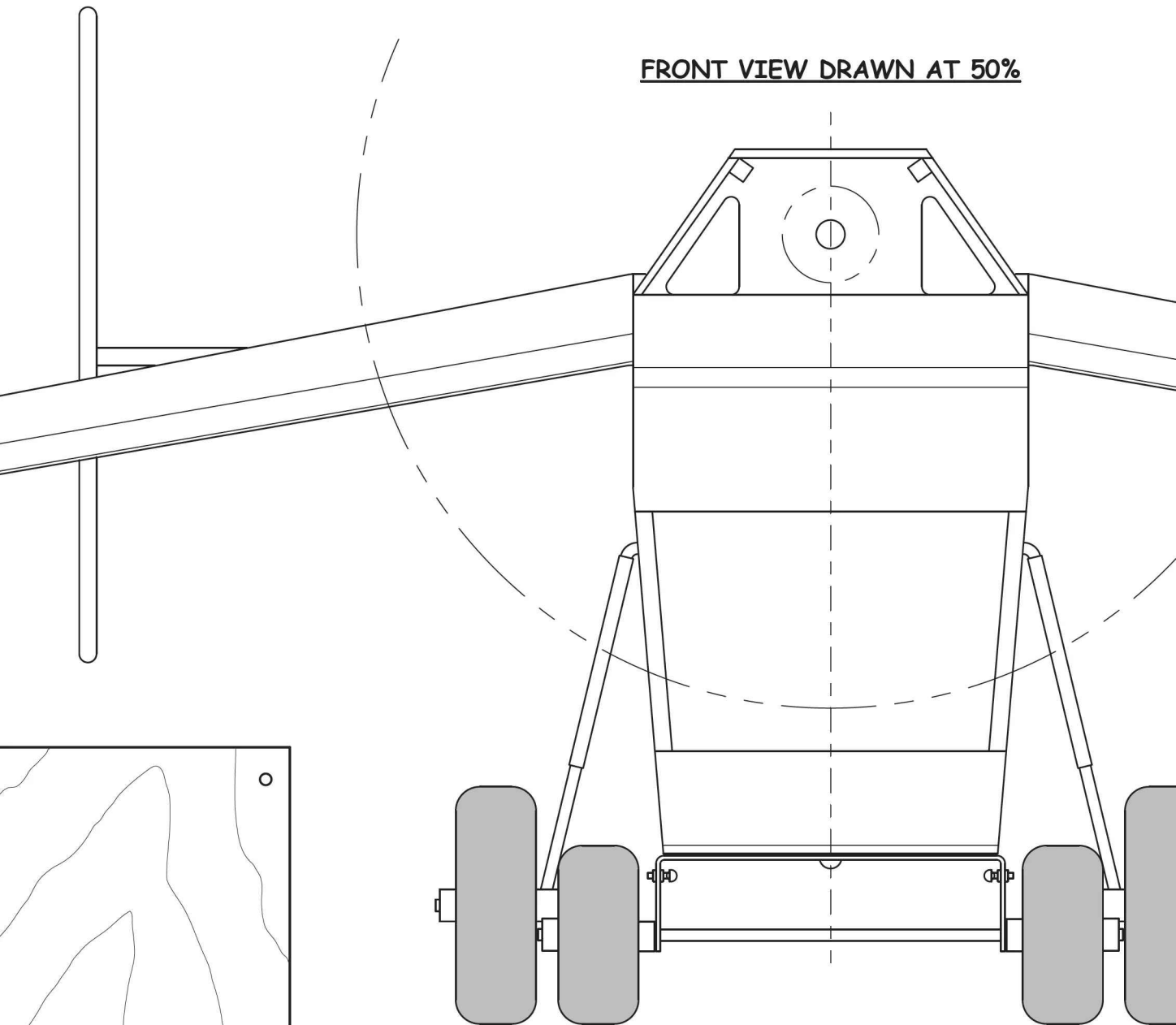


2 OFF 1

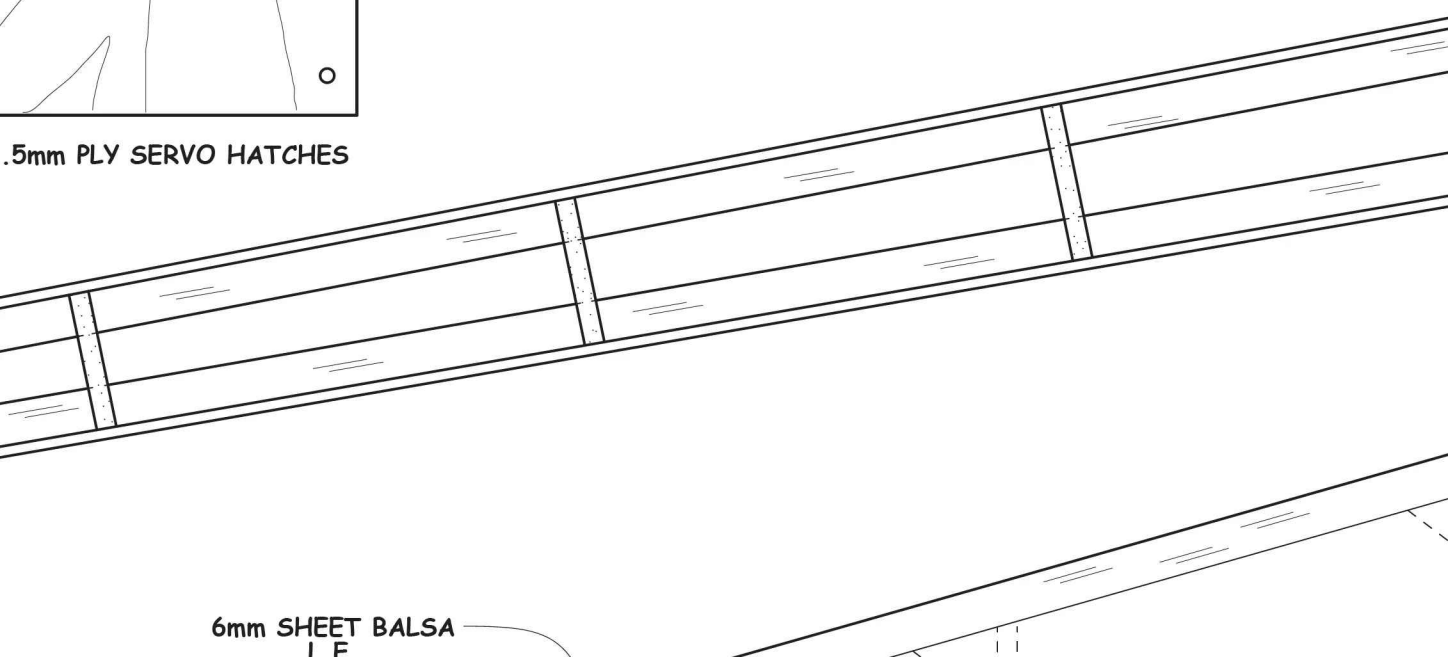
300



FRONT VIEW DRAWN AT 50%

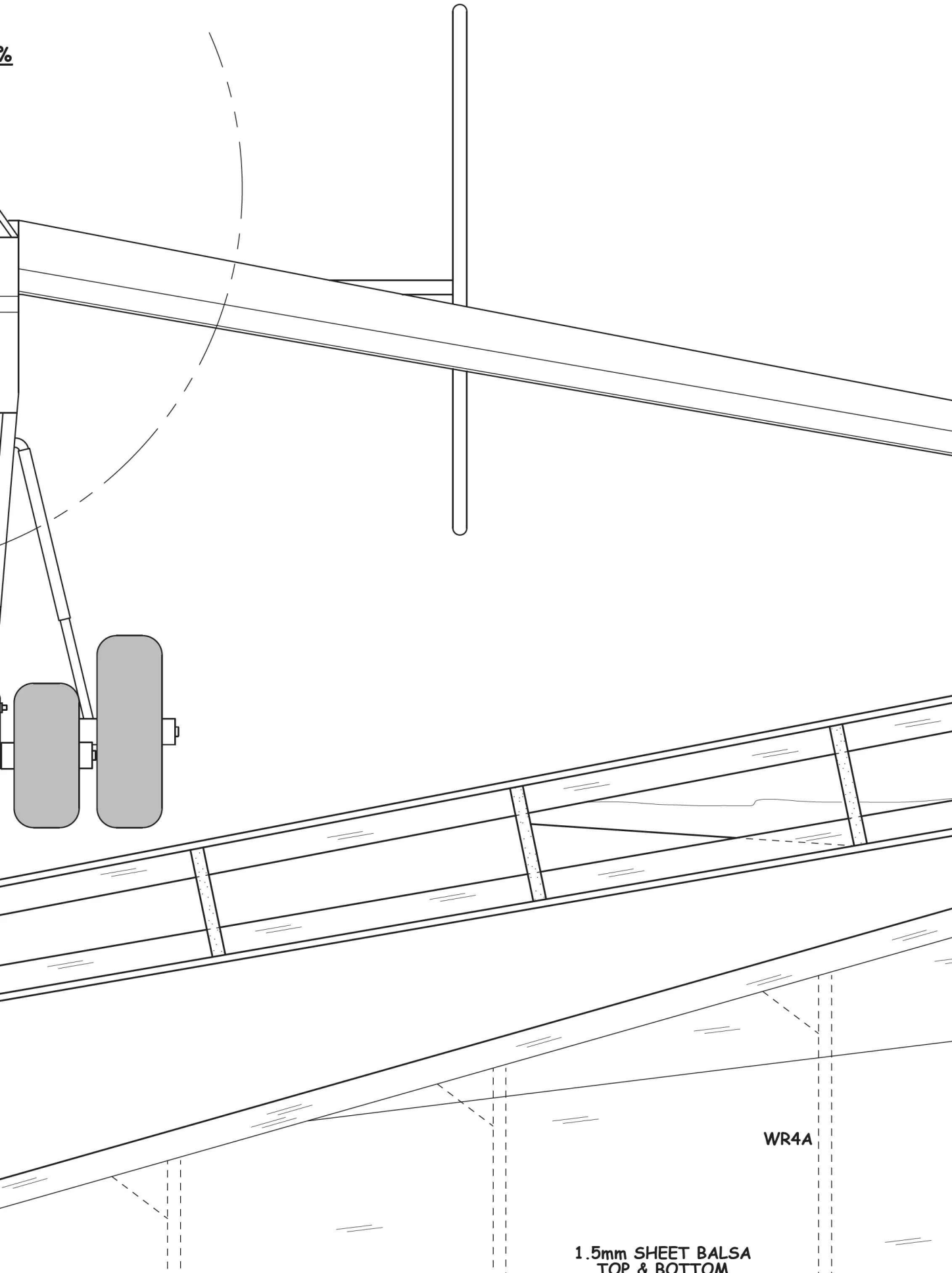


.5mm PLY SERVO HATCHES



6mm SHEET Balsa

%



WR4A

1.5mm SHEET Balsa
TOP & BOTTOM

RCM&E SKYBUG ONE

DESIGNED BY LINDSAY TODD

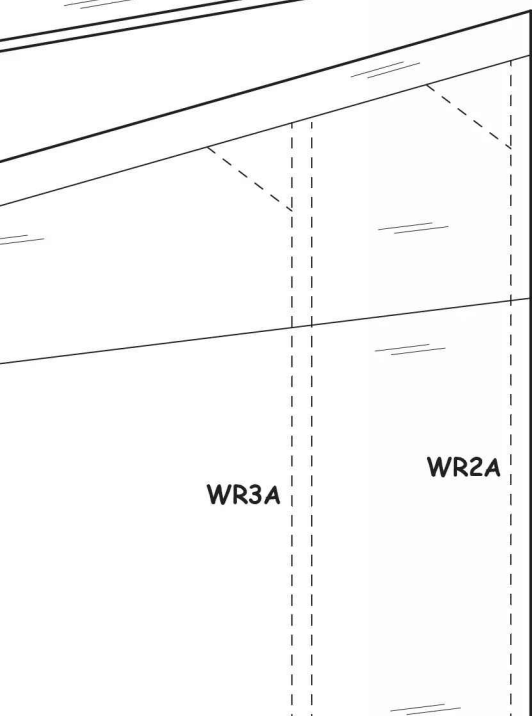
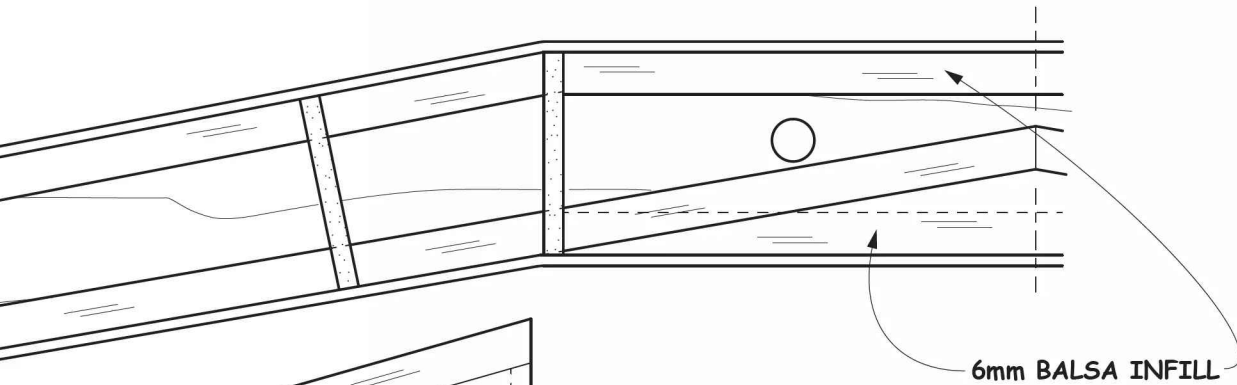
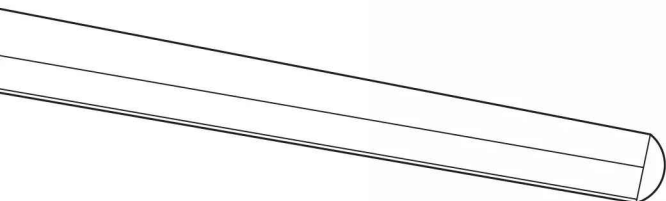
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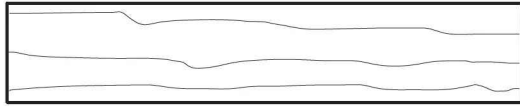
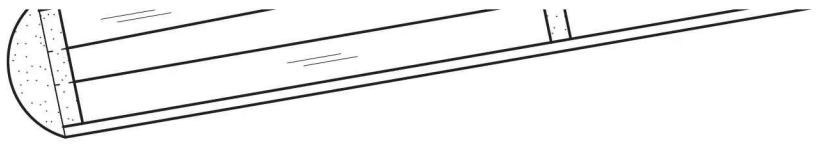
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6mm Balsa INFILL
TOP & BOTTOM

Ø6mm Balsa
DOWEL



8 OFF 3mm PLY SERVO MOUNTING PLATES

200

6mm SHEET
BALSA TIP

100

WR11

WR10

WR9

SCALE
MM

100

6mm SHEET Balsa
L.E.

3mm Balsa
FILLETS

6mm SQ. HARD Balsa
MAIN SPARS
TOP & BOTTOM

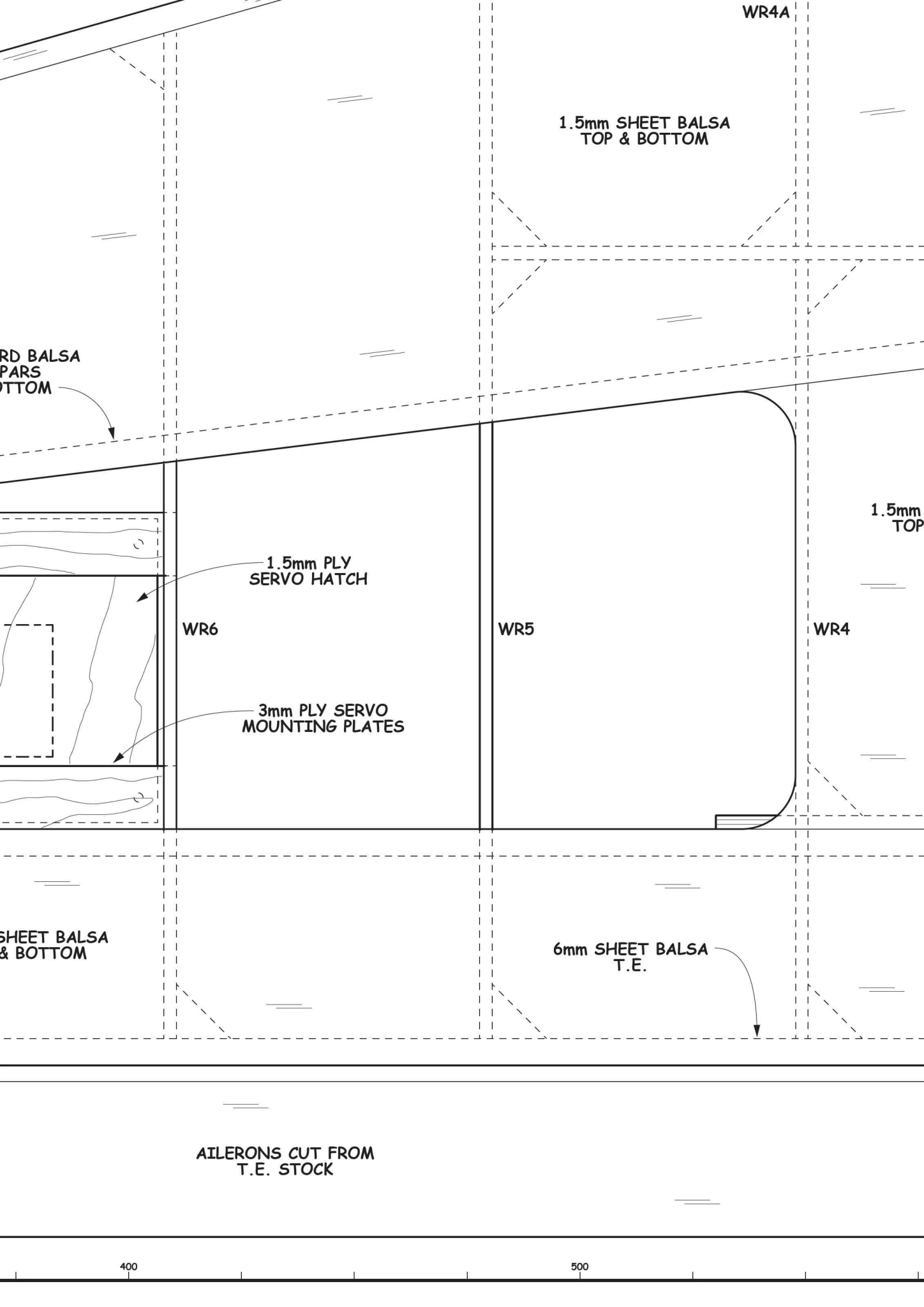
WR8

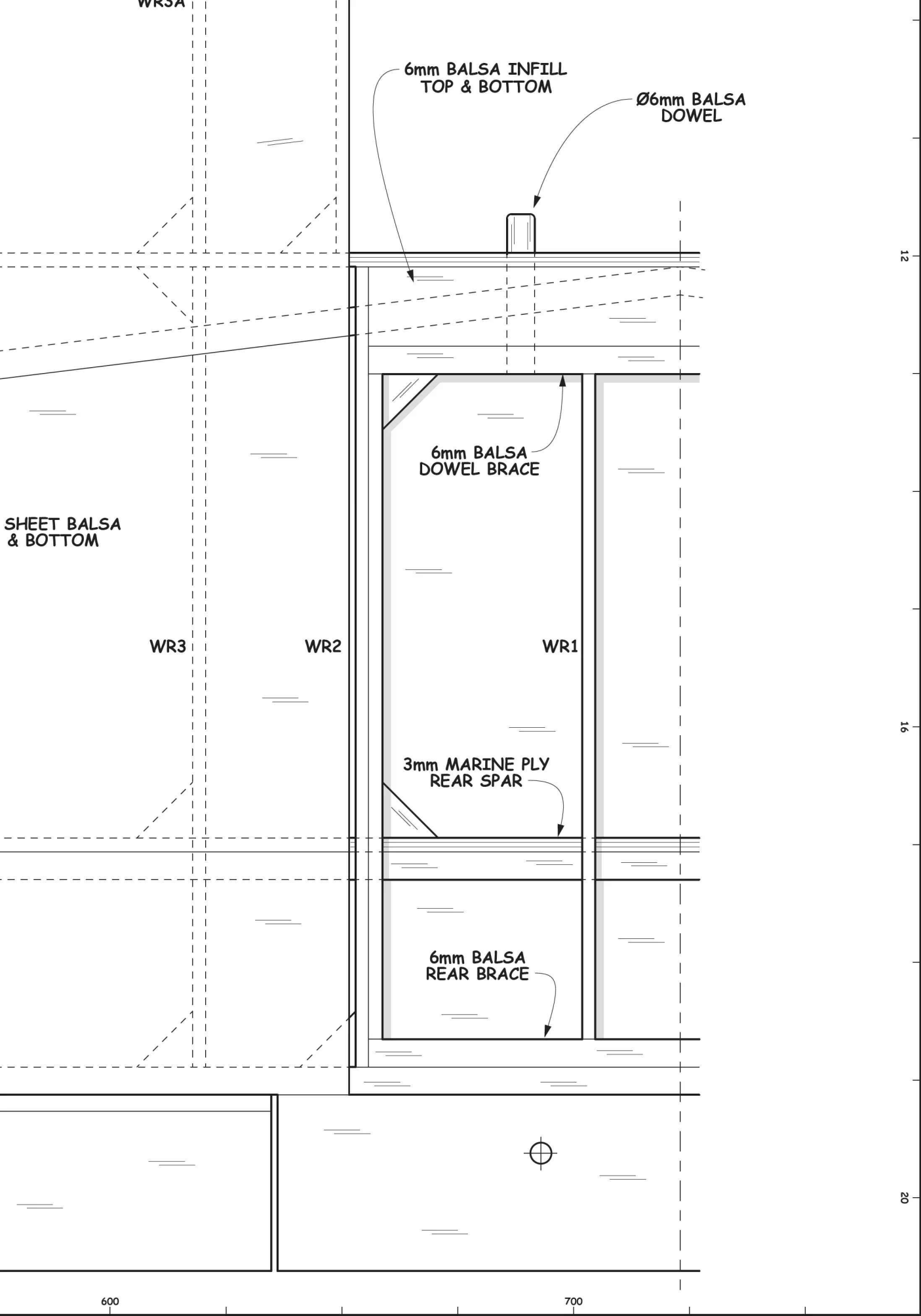
WR7

6mm SQ. HARD Balsa
REAR SPAR

1.5mm SHEET Balsa
TOP & BOTTOM



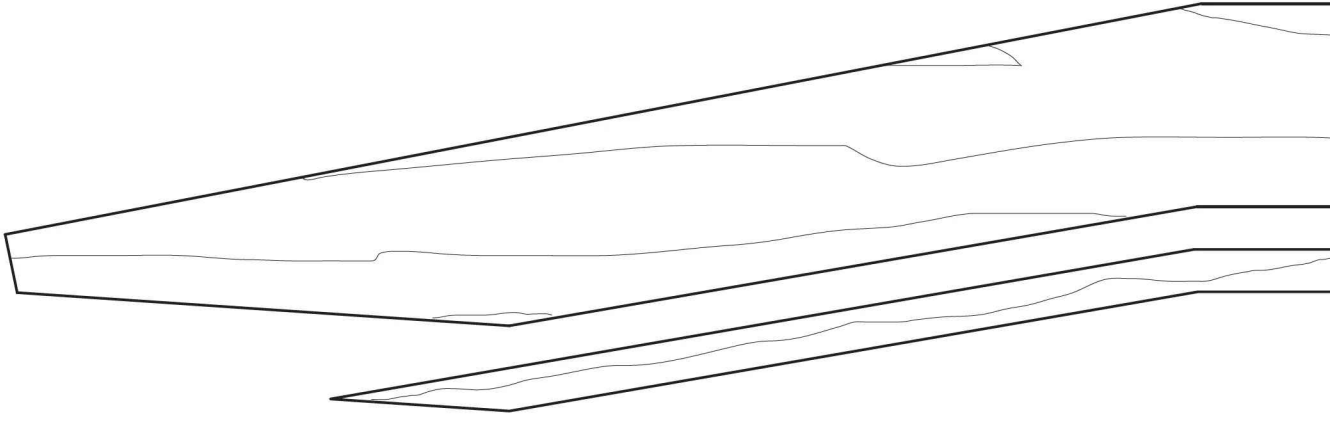




28

24

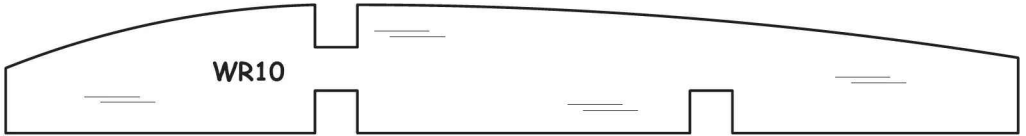
500



WR11



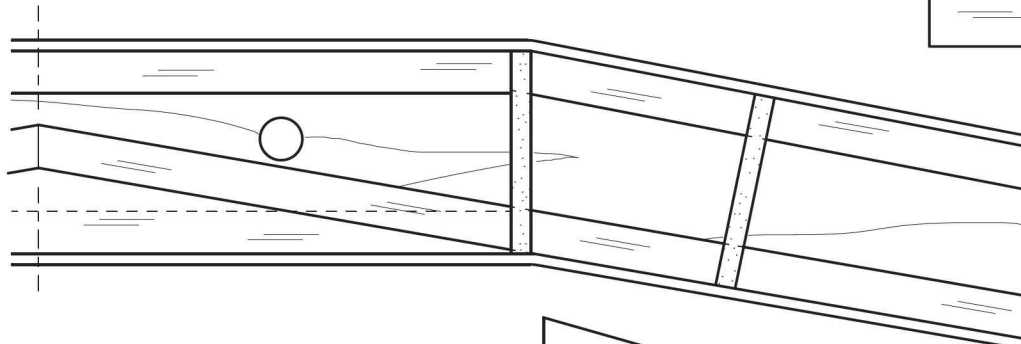
WR10



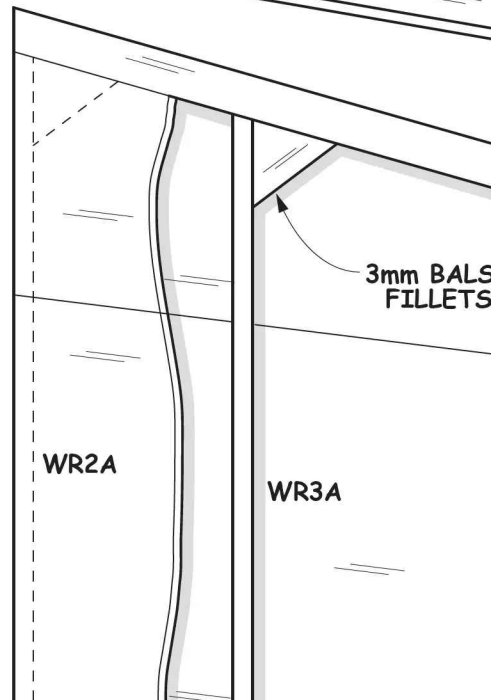
WR9



400



300



3mm BALS
FILLETS

WR2A

WR3A

Ø6mm BALS
DOWEL

○ 3mm MARINE PLY MAIN SPAR ○

3mm MARINE PLY REAR SPAR

WR8

WR7

WR6

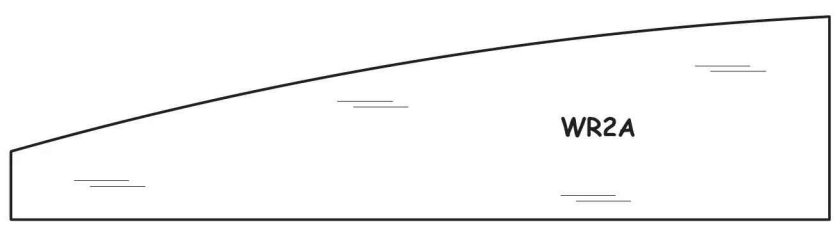
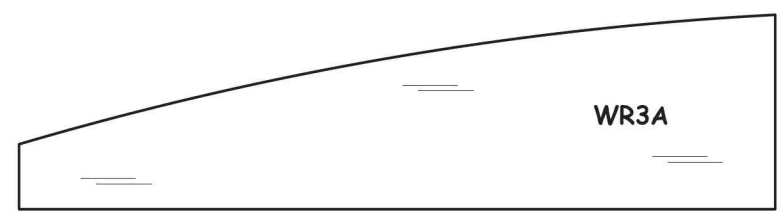
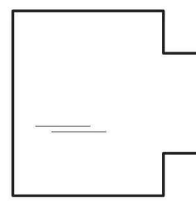
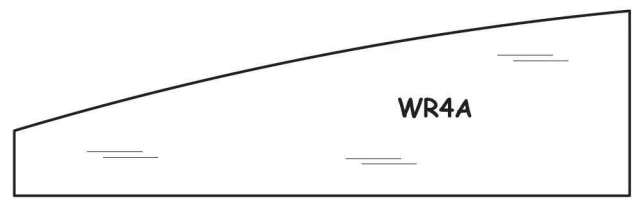
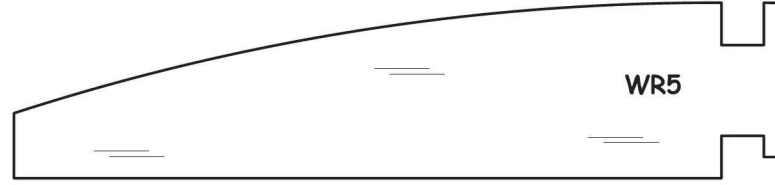
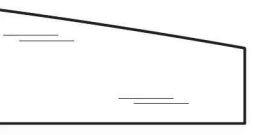
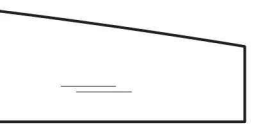
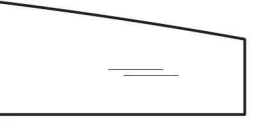
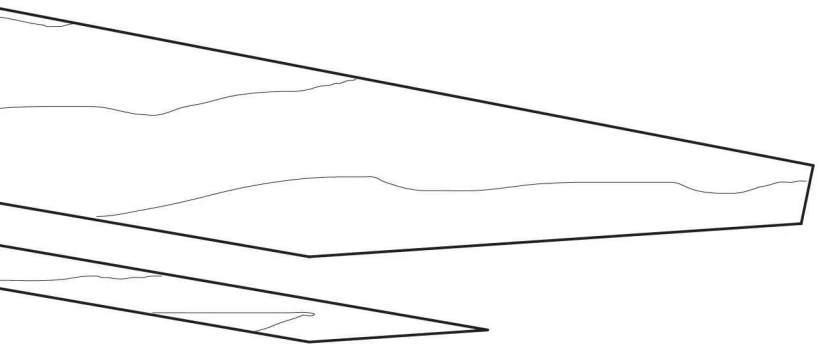
3mm MARINE PLY MAIN SPAR

WING RIBS WR
FROM 3/16" SH
2 OFF EACH
4 OFF V

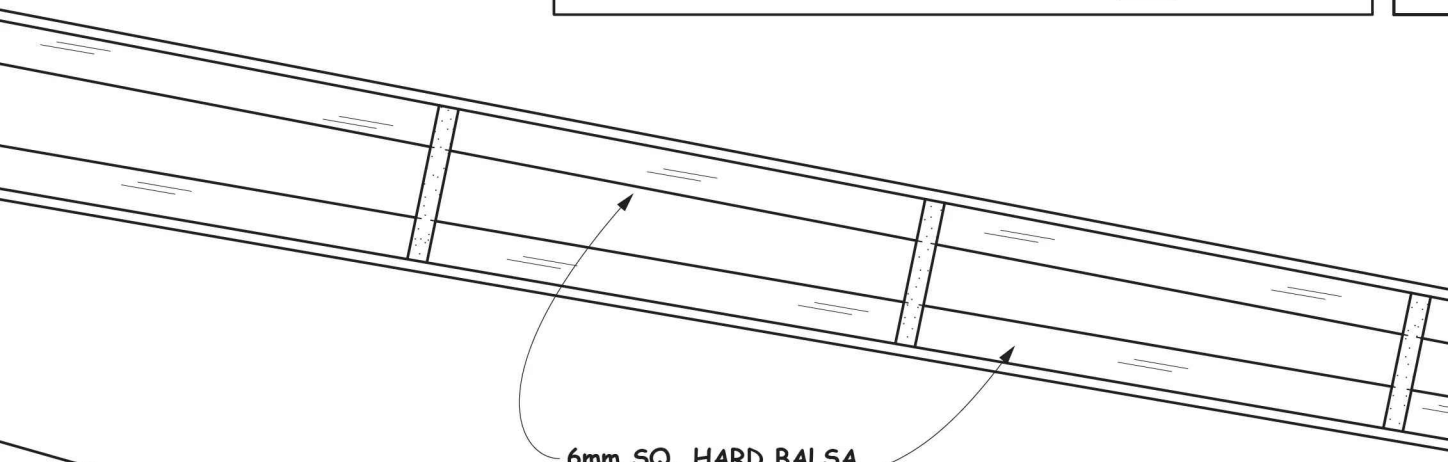
WR4A

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WING RIBS WR1 TO WR11
FROM 3/16" SHEET Balsa
2 OFF EACH EXCEPT
4 OFF WR1



6mm SQ. HARD Balsa
MAIN SPARS
TOP & BOTTOM

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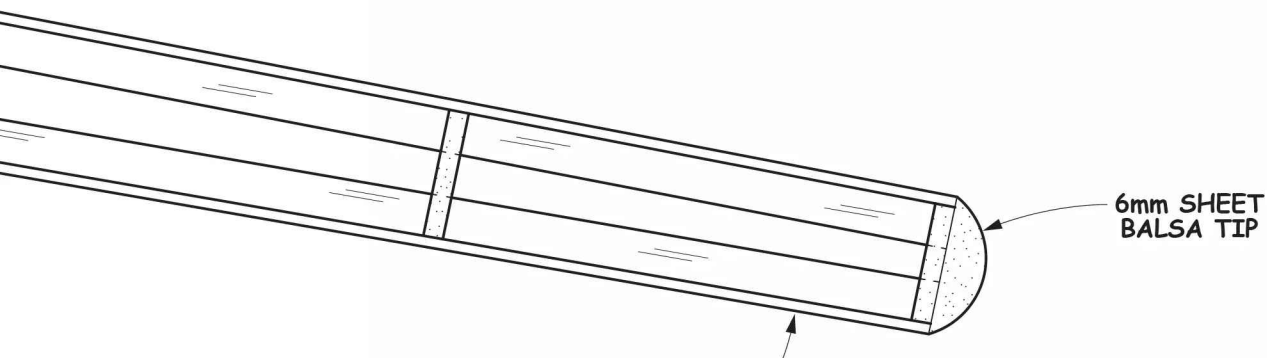
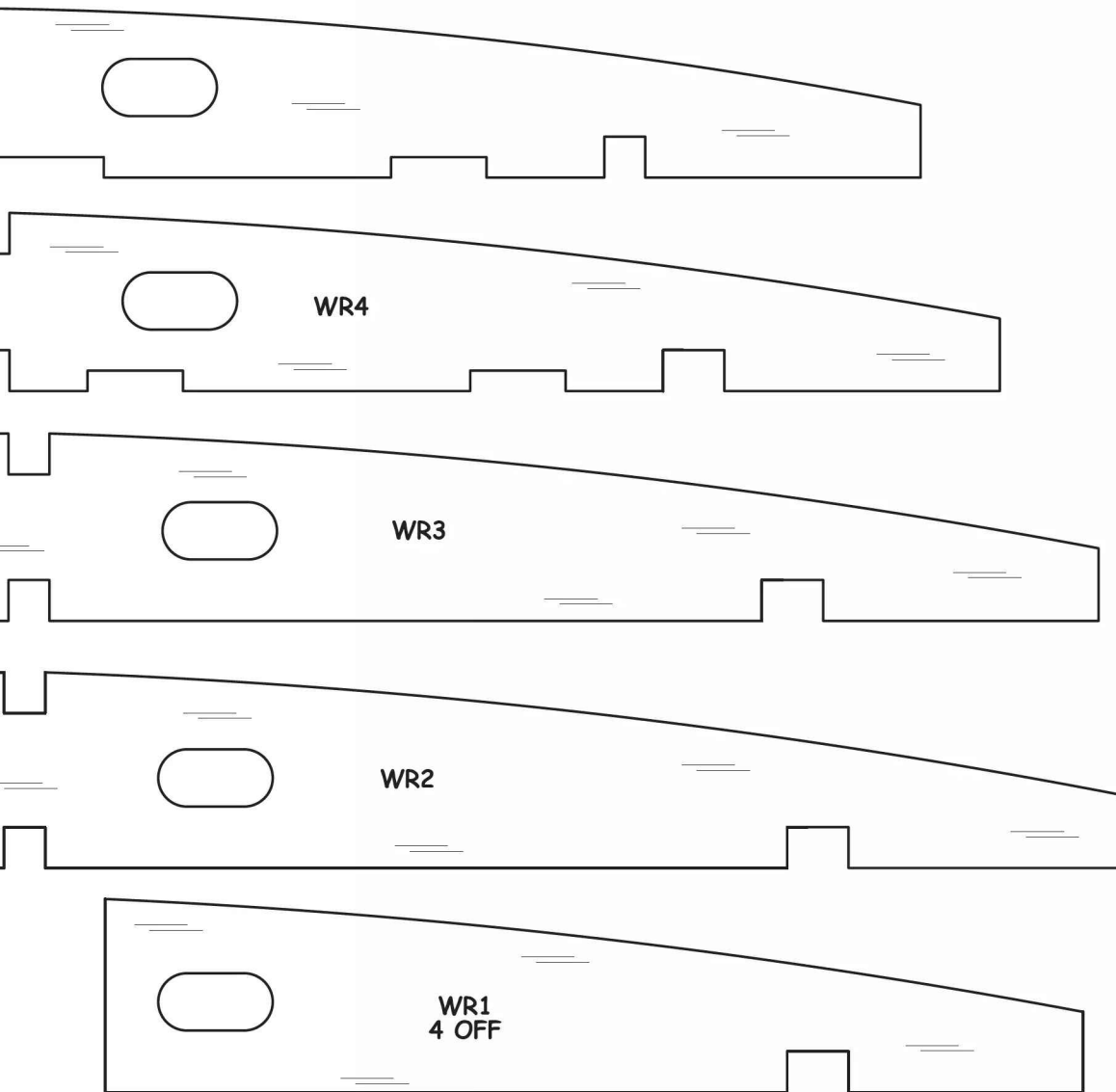
SKYBUG ONE

DESIGNED BY LINDSAY TODD

PLAN No: RC2282

No. OF SHEETS: 4 OF 4

First published in
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Ø6mm Balsa
DOWEL

3mm MARINE
MAIN SHEET

1.5mm SHEET
TOP & BOTTOM

WR1

WR2

WR3

6mm SQ. HARD
REAR SHEET

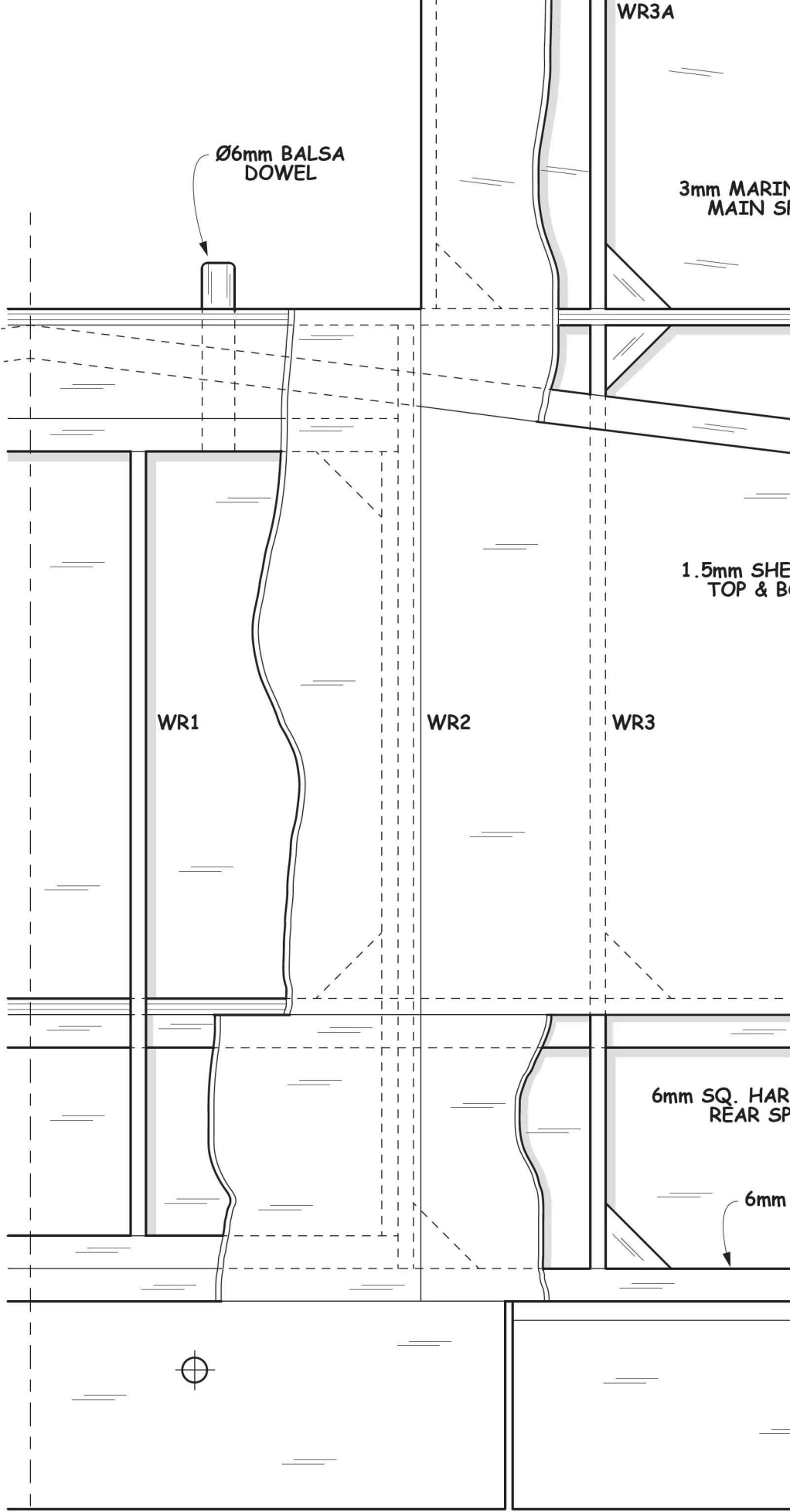
6mm

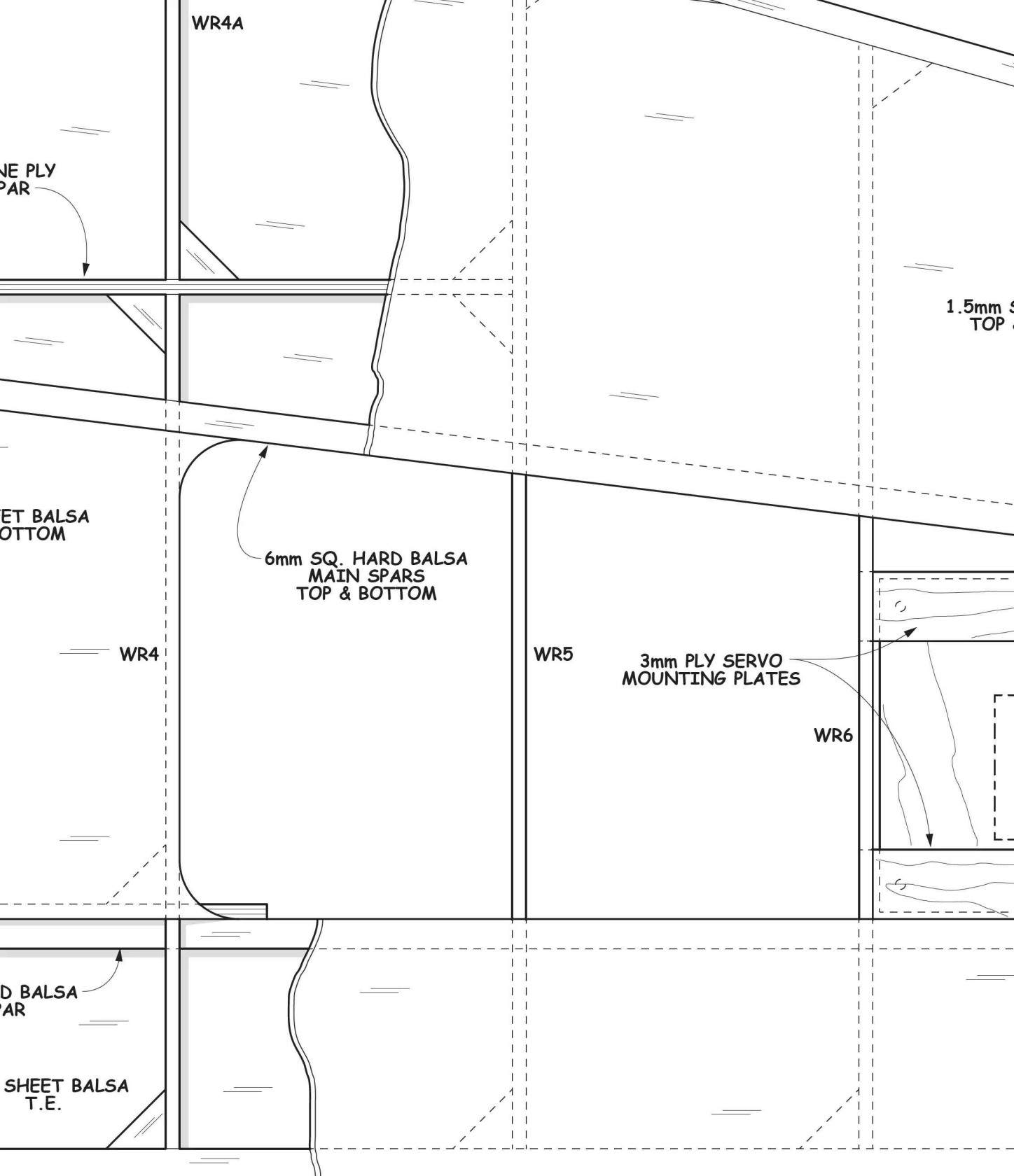
200

100

SCALE
MM

100





AILERONS CUT FROM
T.E. STOCK

6mm SQ. HARD Balsa
MAIN SPARS
TOP & BOTTOM

6mm SHEET Balsa
L.E.

1.5mm SHEET Balsa
TOP & BOTTOM

1.5mm PLY
SERVO HATCH

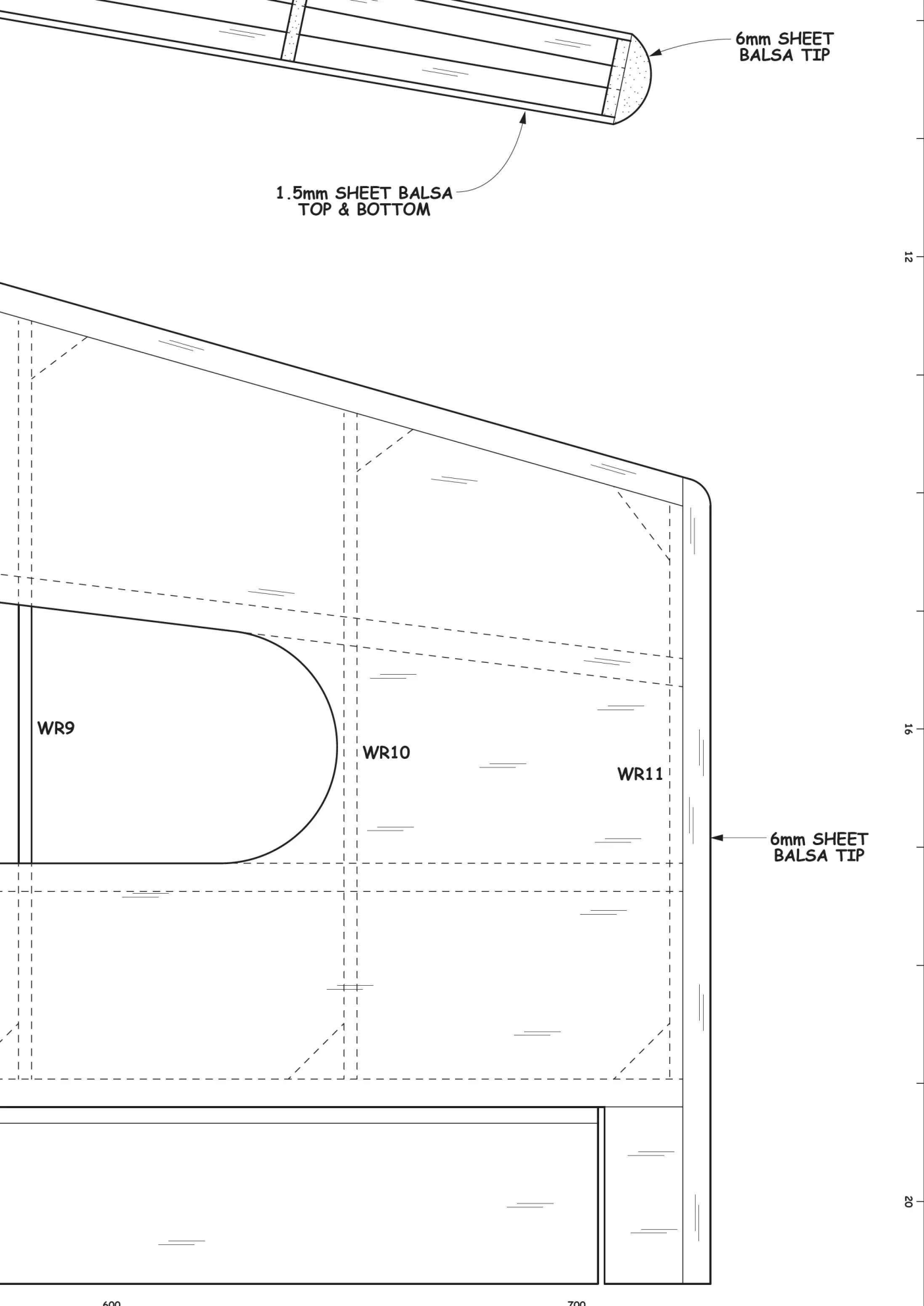
WR7

WR8

1.5mm SHEET Balsa
TOP & BOTTOM



OM



6mm SHEET
BALSA TIP

1.5mm SHEET BALSA
TOP & BOTTOM

WR9

WR10

WR11

6mm SHEET
BALSA TIP

600

700

12

16

20