Warringah Radio Control Society Incorporated

(Incorporated under the Association Incorporation Act 1984)

Newsletter - September 2004

David Foster's "Spitfire" readying for a landing, more photos inside.

MEETINGSMEETINGSMEETINGSMEETINGSMEETINGS

The next meeting will be held on Tuesday, 12th October 2004 at Tennis Cove, Eastern Valley Way, starting at 7.30 pm.

And don't forget the Christmas Party and our fantastic Raffle, contact Brian Porman and Stefy Grech for tickets

FROM THE SECRETARY'S DESK

(General Meeting August 2004)

I shall not repeat all the matters recorded in the August minutes which may be read on the Web site (www.wrcs.org.au) but I shall emphasise one issue. The meeting unanimously adopted that: MOBILE PHONES, INCLUDING BLUE-TOOTH DEVICES, are banned from any point past the bridge, following clarifying advice from the MAAA.

The road work, which has not cost us any contribution is finished as far as the Parks Department is concerned. Any one who has walked the fire trail will see that Tanker access is now assured to, and along the Power lines. For reasons not understood by the writer, no work is permitted by the Lands Dept within the lease. Instead of being able to carry out lasting and beneficial maintenance, the ridiculous [the writer's opinion] situation within the lease remains unchanged.

The Trash and Treasure night saw a wealth of gear up for grabs. There was a plethora of kits, NIB, and engines, new and used. There were some real bargains. One for example was a pristine profile sports model, with a near new OS 46, 5 servos and a Hitec dual conversion receiver which went for $150!. A 40 size Trainer, sans wheels and all gear went for $15! $5 and $10 were quite common successful bids, Unlikely bid wars flared up from time to time between Al Zuger against Andrew Wolf and Peter Barnes. The night went to 11.40 pm!

21 tickets @ $5 each were sold in the Xmas raffle for the large Tomahawk ARF and PICA Cessna. See Brian Porman or Stefy Grech for tickets.

NEXT EVENT:

SCALE DAY Sunday, 26 September 2004

Classes: Military, Civil, both Small and Large Scale.

THIS IS A FUN EVENT WITH SAFETY PARAMOUNT; COMPETITION IS INCIDENTAL.

COLUMN 9.9

(incl. GST)

One of the three STUKA workshops was recently raided and "raised" to the ground. It will be sometime before the production Supervisor, Herr Grech, is able to proceed at a more distant and safer location, namely "zer garage"!! Meanwhile a superior force, code name "Lauren", is in complete control!

And I guess we will just have to wait for the final instalment for the "From the Workshop" Series

Ron Lucas is selling all his goodies on our WebPage, he tells us he is giving up aeromodelling! He says he just cannot get the time to fly or build any more (and claims not to be getting any younger!).

Mike Minty reports (since the report was written for this Mag) that he has bought a Zagi so he will be flying again soon.

Your Editor can't help asking when Mike is about to fly back to Oz so he can take over publishing the Mag?

Peter Barnes (very much to his embarrassment) has learned the obvious ... for R/C flight to occur you have to bring along your Tx.

Col Mitchell and Al Zuger were both accused of making telephone bids at our Trash & Treasure night. It turns out that they were in fact just getting the OK to spend from the boss.

Garry Welsh spent a fruitful night at the Trash & Treasure. He made the first purchase of the night and then spent the balance of the night constructing the ARF glider kit he had purchased.

WRCS CHRISTMAS PARTY

4 pm on SATURDAY 11th December

(dinner served at 6pm, keep your ticket to hand it in!!)

We again are catered for by McGoo's Spit Roast with lots of yummy food.

Adults $20;
Children 5-12 $10;
under 5 FREE

Enquiries and Tickets available from Brian Porman and Stefy Grech

Raffle tickets are also available from Brian Porman and Stefy Grech, or by mailing your cheque to:
Brian Porman at 27 Kirkpatrick Street North Turramurra 2074

First prize is a pick of:
ARF Piper Tomahawk (77 inch span) or a PICA Cessna 182 kit (86 inch)

Tickets are $5 each.

TOP GUN

– the words that have been so overworked since the film with wossname in it! But when RCM&E advertise the BMFA Top Gun event at Rougham airfield (used as a base for Flying Fortress's in WWII) in Suffolk, I really the need to check it out.

I spent the evening before the big day with a few Old Speckled Hens in the bar of the Beehive pub just down the road and the night curled up in the van in their car park. The morning looked good, not quite sunny, but there was some blue sky …..for a while. By the time I got to the field the first shower had hit but it was soon over and we had a good few hours of warm sunny weather.

What a collection of planes and dealers – far too many of both to mention all of them but I'll pull out some of the better ones. To start with a guy dragged in a Lancaster, a 17 foot span Lanc and electric powered! Yep, 4 x 1 Kw motors and a bucket full of cells. It was Tony Nijhuis renowned for Lancs of all sizes. It flew magnificently its "presence" in the air only marred by its quietness. Close up I was amazed to find the amount of detail on it including thousands of rivets which he had done by hand in white glue. It is currently the lagest electric model in Europe, possibly the world!

Just as impressive was the rolling circle performed by a 1/3 Pitts. It was a tight circle and the plane never seemed to be horizontal and never seemed to be in a position to generate lift and, of course, finished up hanging on its prop a few feet off the ground.

But for the ultimate in realism you had to see the 14 ft span Me262 powered, of course, by two jets. It was so big and so smooth that it really was hard to believe it was a model in the air – and of course the noise is right as well. Here it is just after take off.

Before we leave the biggies there are two that have to be included from opposite ends of the military time line.

Firstly Colin Strauss and his 1/9 scale C-17 Galaxy and a few mind boggling statistics, 120kgs in weight, 16 battery packs (93 cells altogether!), 12 x 5.5" main wheels, 6.3 metres span and 1.87 metres high with 4 Jetcat P120 turbines chucking out 12kgs of thrust each fed from a common 12.5 litre fuel tank, and an on board compressor to keep up the pressure for so many functions – phew. It arrives in 7 massive pieces and when assembled looks like this as it comes in to land.

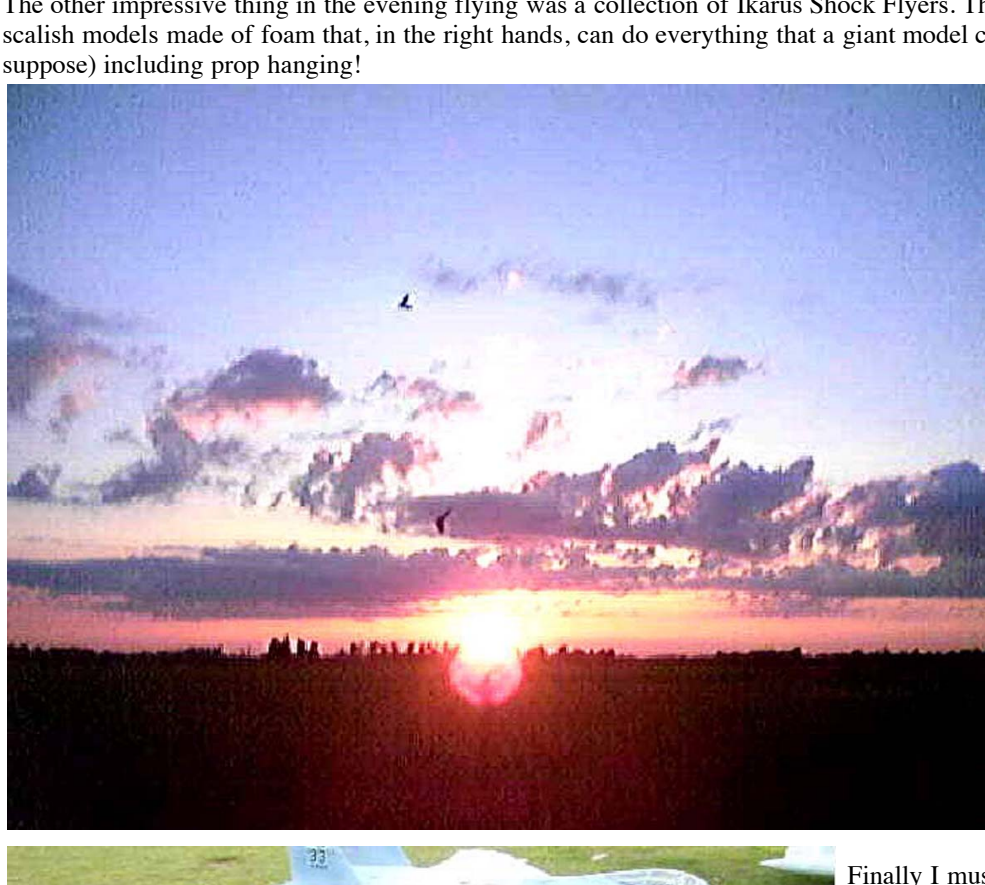
Again its presence in the air is something else. The flight could have ended in disaster as on its take off run it hit a plastic "witches hat" at the far end of the runway! It flew ok but on landing revealed a huge gash in the bottom of the fuselage. That was on the Saturday and they took it away and with a lot of midnight oil it was back to fly on the Sunday.

The other one was Dave Horton and his ½ Size Fokker Triplane with a 350cc Weslake twin driving a 48x10" hand made prop. I mean this is big and very impressive in the air. I got close too it and then realised just how big it is, I couldn't see the top of the wing! It flew well and in four flights managed a proper landing each time despite their reputation for nosing over.

There was a break of an hour or more when we had a huge thunderstorm with lots of lightning – nobody wanted to stand around pointing an aerial upwards! So it was into the trade tents and look at all the good stuff for sale.

Then there were the jets, scale ones, sexy ones, and all going fast! No official times were given but there were a lot of mutterings about 175mph on one pass! It was interesting that in the early evening after the official flying there was an electric ducted fan model that was nearly as fast and only about 20' span.

The other impressive thing in the evening flying was a collection of Ikarus Shock Flyers. These are small electric profile scalish models made of foam that, in the right hands, can do everything that a giant model can do (except smoke I suppose) including prop hanging!



I stood next to one of the pilots and watched his thumbs – amazing, they were in constant motion. I asked him whether he thought about what he was doing, he said "no time, I just look at the plane". The other impressive sight was a father and son flying their Zagis. They were having great fun including touch and go's – neat with a pusher wing. They then moved on to combat just trying to bump each other out of the air. Those Zagis really bounce, here they are in the setting sun.

Finally I must report on a demo in the afternoon of a device that only a warped modeller would produce …..a gas turbine powered wheelchair! Here it is with all its plumbing hanging in the air. The jet started life as the starter motor in a Lightning. He said he has got it up to 60mph which was when he chickened out. This weekend he only managed about 35mph as it was on grass but it sounded great! That's his other models in the background.

So, a terrific weekend but marred by the weather (Sunday was rainy for most of the day) and now I must go and get a Zagi!

See you sometime,

Mike

THE WRCS PLAGIARIST

The Plagiarist was developed originally for WRCS.

The intention was to produce an easy to build and fly model aircraft. The end product is a rugged everyday workhorse model which is more than capable of flying the "Gold Wings" schedule.

The speed envelope is wide; it has good high speed characteristics which derive from the comparatively narrow chord wing but it is also capable of flying safely at low speed.

The symmetrical wing section not only contributes to the aerobatic performance it also permits the aircraft to be flown safely in windy conditions. The wing has no dihedral but the anti-stall wing tips provide ample stability at low speed/landing approaches.

The firewall is pre-drilled to suit the 46-50 Engine mount provided and, as far as possible, "Tag and Slot" components are provided.

To Complete The Aircraft You Will Need-

4+ Channel Radio	5 Servos
"Sullivan" Slant Type Fuel Tank 10-12oz	Fuel Tubing
Wood Glue. ("Triton") is excellent	30 Min Epoxy
Thin Contact Cement	CA Adhesive
6 Off 2-56 Du Bro Part Threaded Rods	3 Off 10-32 Blind Nuts
4 Off 4-40 x 1.25" Pan Head Screws	4 Off 6-32 Blind Nuts
4 Off 6-32 x ¾" High Tensile Bolts	5 Off 10-32 Nylon Bolts
1 Off Throttle Cable & Sleeve	6 Off 2-56 Clevises
4 Off Control Horns	Hinges .625" Wide
¼" Dowel. (Push Rods)	Push Rod Exits. (Optional)
Axles & Collars	3" Dia Wheels
Covering Material	

FUSELAGE.

The fuselage components are almost totally "Tag and Slot". We do recommend using a good quality 30 minute Epoxy on all glued joints from the firewall up to and including the trailing edge area of the wing. A good quality woodworking glue can be used in other area/s. ("Triton" Brand etc). We recommend the fuselage be "Dry Fitted" to ensure all component location/s are noted and memorised prior to actual fitting and epoxying. We suggest dismantling the fuselage and laying the parts out in a recognisable order before proceeding The actual fuselage crutch should be assembled first making sure all components are placed squarely and in line with each other laterally/crosswise.

The wing seating plate can be fitted/epoxied to the rear wing bulkhead, if you consider the 10-32 tapped holes in the wing seat to be inadequate it is quite acceptable to increase the hole diameter to accept ¼" bolts, and, if you wish, add blind nuts to suit. (If blind nuts are not fitted we suggest adding thin CA to the threaded section to improve the strength and durability of the threads).

Assemble/epoxy the rest of the crutch, the triplers, and the servo tray. Ensure the front bulkhead is round the right way, (Refer throttle cable pre-drilled hole). Small sections of scrap ply can be added to the underside of the servo tray to provide additional purchase for the servo attachment screws. The completed fuselage crutch together with the triplers becomes an immensely strong sub-assembly.

The fuselage crutch assembly can now be fitted/epoxied to the sides and the intermediate formers can be glued in place. After the epoxy has set attach the engine firewall, (30 Min Epoxy essential), again making sure the firewall is around the right way. (Engine "Leans" at 45 degrees to the RIGHT when viewed from aft). The 6-32 Blind nuts can be epoxied to the firewall either before or after fitting to the fuselage. If desired small sections of scrap balsa can be fitted to the inner firewall corners for added strength/vibration absorption. The undercarriage support plate can now be epoxied in place. The remainder of the fuselage can now be fitted to the crutch using good quality woodworking glue.

A neat way to fit the front hatch is to bevel the leading strap across the firewall at 45 degrees and add the main hatch to fit, securing the main hatch with a small bracket leading below and touching the main fuselage bulkhead. (Screw from inside the wing zone).

If a more traditional securing method is desired an optional "Tongue" is provided to engage the leading edge strap and small screws engaging with scrap triangular corner timber sections can be used at the aft end of the hatch. We do recommend fuel-proofing the tank area with "Estapol" or clear enamel etc.

A "Sullivan" slant type tank placed sideways is ideal for this aircraft, not only does it fit perfectly in the available space the spray bar feed height is excellent. (There is room for a 12oz tank if required). The throttle cable also has a straight stress free run to the engine. (Take both feed and pressure line/s out on the RHS of the firewall).

When installing the engine we prefer to drill and tap the excellent engine mount provided for 4-40 UNC pan head mounting screws. (.46 Size Engines). The undercarriage centre section can be drilled with clearance holes for three 10-32 Nylon bolts. Arrange the holes in a triangular formation, 2 at the front and 1 at the rear of the undercarriage centre section. Spot drill through these holes and drill through the fuselage undercarriage support plate. Add, using 30 min epoxy, the three 10-32 Blind nuts. This provides a secure "Knock Off" undercarriage assembly.

WING.

The wing can be assembled in two halves as is usual and traditional, however, as the wing has no dihedral the main spars can be "Spliced" using 30 min epoxy and the wing built as one complete unit. If this, recommended, option is adopted the "Splice" area should be in the order of 2"+ length for maximum strength. (CASA states a wooden spar splice should have a 12:1 Thickness/Length Ratio for 1:1 Scale). The ribs are all "Tagged" therefore if the building board is perfectly flat the resulting wing will be straight and true.

Commence by placing the spar/s on the building board making sure they are straight and remain in contact with the board throughout the building process. (If the board is covered with two thicknesses of waxed lunch wrap paper glue will not adhere to the board). Add the ribs as required using the notches and the sheer webs to establish the spacing required. CA Adhesive can be used for this but we do recommend "Backing Up" the joints with a wood glue for added strength and durability.

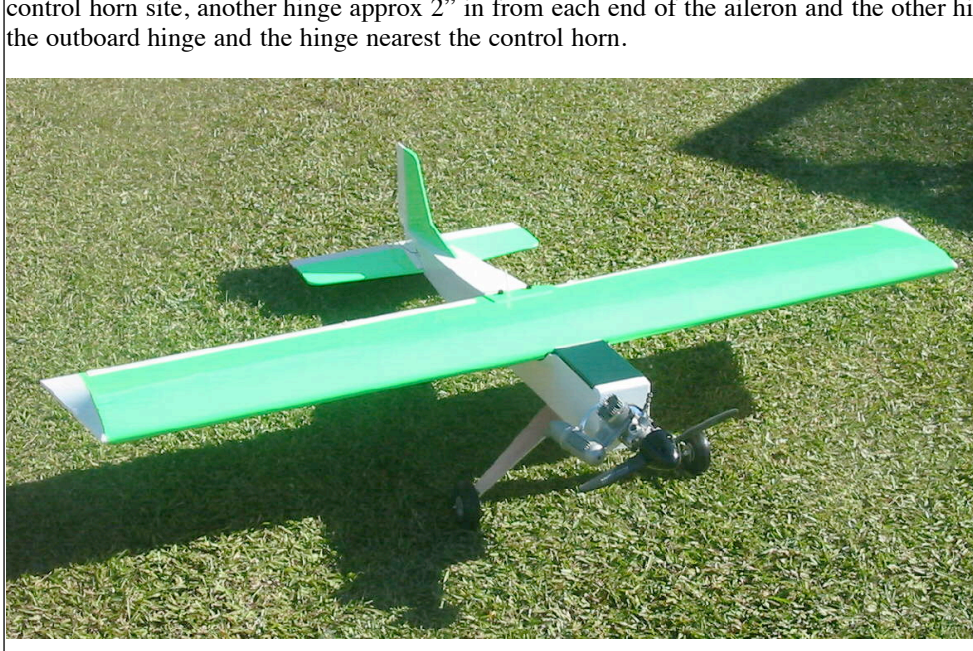
The centre ribs are fashioned from Plywood, these will be cut to fit the main centre braces. Line up all three braces using the dowels provided. (Use 30 minute epoxy in this area).

The outside ribs and the wing tips are also plywood for added strength and durability. Add the top wing sheeting whilst the wing is still anchored to the board. A tedious but worthwhile exercise is adding, using CA Adhesive, small pieces of scrap, (Approx ¼" wide x 3/32" thick), Balsa to the leading edge bays level with the ribs before adding the sheeting. This gives a better glue bonding area for the wing sheeting. (Front edge and underside as opposed to a butt joint front edge only). Thin Contact adhesive is ideal for adding the sheeting. Only apply in the needed, (Contact), areas.

When the leading and trailing edges are ready for shaping masking tape added to the sheeting protects it during the shaping process. Reading from the wing tip the 6th bay in becomes the servo housing bay; using this bay the standard servo leads are long enough to protrude through the wing centre sheeting. We do recommend rolling a simple A4 paper tube and placing/gluing it in the appropriate rib holes to assist with servo lead insertion and removal after covering the wing.

We also recommend adding the tips after sheeting etc as the wing is easier to handle sans tips. If small 3/16" wide thin ply or Balsa strips are added to the tips it is much easier to cover the tips, (Better covering material adhesion). Cover the wing tips separately, perhaps in contrasting colours, before covering the wing proper. The ailerons can be cut from the 9.5 x 25mm strip provided but special aileron stock is in the process of manufacture.

We recommend 8 Hinges, (Total), be used for wing hinging. We suggest placing one hinge approx 1"inboard of the control horn site, another hinge approx 2" in from each end of the aileron and the other hinge approx midway between the outboard hinge and the hinge nearest the control horn.



STABILIZER & FIN.

We do recommend fitting these pre-covered items after the wing is trial fitted to the fuselage. Carefully remove the covering material as required to ensure maximum adhesion to the fuselage. If the stabilizer and fin are trial fitted and marked the covering material can be cut away approx 1/8" from the mark/s thus no unsightly edges will show after final assembly.

It is essential the stabilizer is parallel to the wing and this can best be determined by sighting along the attached wing. After securing the stabilizer with 30 min epoxy the fin can be added to the fuselage at right angles to the stabilizer. (Again using 30 min epoxy).

For added strength and better aerodynamic efficiency a corner triangular fillet can be epoxied to the zone where the stabilizer meets the fuselage. Prior to fitting/hinging the elevator a small rounded notch should be cut to clear the tail wheel assembly wire which, in turn, goes under the rudder and is secured to it with a small strap to provide tail wheel steering. Using this system it is easy to replace the tail wheel assembly without disturbing the elevator should it be necessary to do so.

It is easier to add the control horns before fitting/hinging the rudder and the elevator to the fin and the stabilizer. We recommend 4 Hinges, (Total), be used for the elevator and 3 Hinges be used for the rudder.

If you elect to use dowel type push rods the following will ensure ultra strong units. Drill the holes for the 2-56 wires approx 1" in from the ends, groove to suit, and bind the exposed wire section with terylene thread or fishing rod binding thread. Open the binding up to about ¼" spacing until the other exposed wire is met then bind as before. On completion thinly coat the whole push rod with 30 min epoxy.

Prior to flying the aircraft please check the balance point with an empty fuel tank. A safe initial position is 28% of the chord back from the leading edge of the wing.

Suggested control throws as follows-

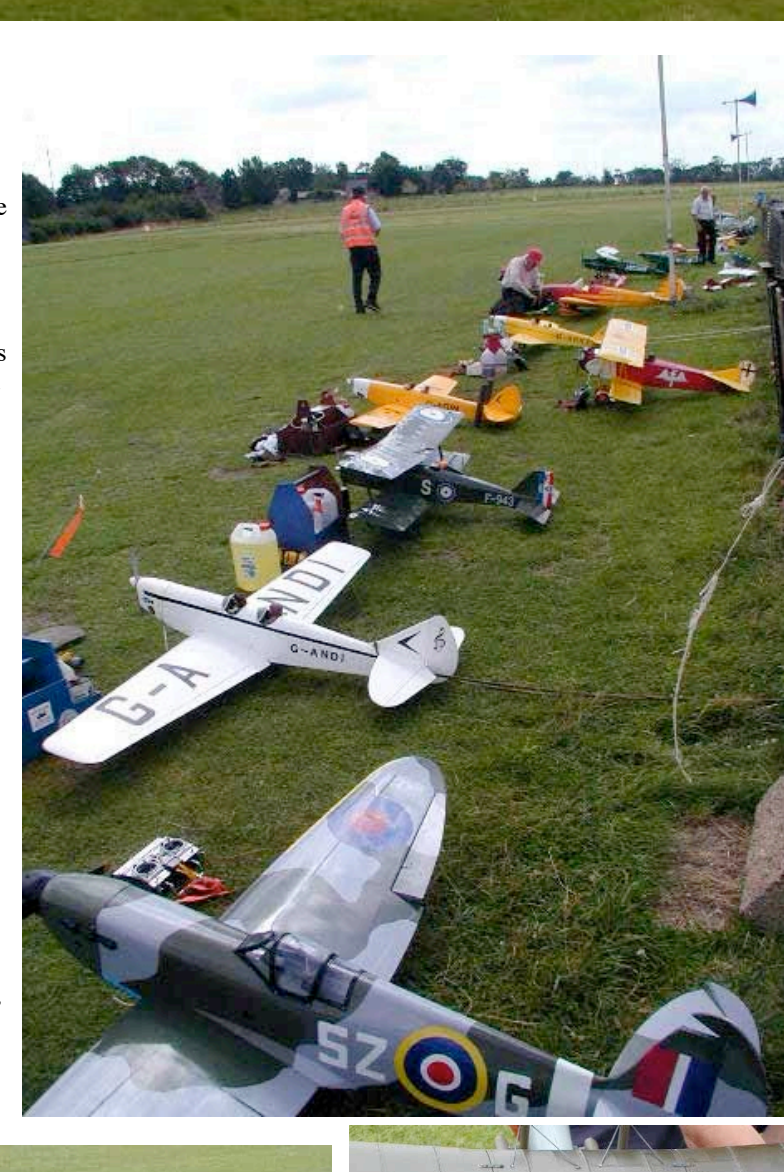
Ailerons +/- 9/32"   Elevator +/- 3/8"   Rudder +/- 13/16"

HELLO FROM OLD WARDEN

I'd been up in Norfolk and was slowly heading back to London when I realised I was close to Old Warden, the home of the famous Shuttleworth Collection of flying aircraft. Yes, it is a museum but one that believes planes should fly and does all it can to make sure all its aircraft do – even the 1909 Bleriot XI with its original engine!

I arrived in the early afternoon to find a bunch of guys flying models! I know that they host large meetings of models but this was the Old Warden Model Aircraft Club – the locals. I chatted to some of the fliers (as usual they were all, shall we say, of more mature years) and found it is a very active club of some 150 members and with this as a field (taken from the public car park, the cars down there are the fliers) it was no surprise that the fine weather had brought out quiet a few models – interestingly most of them were scale.

Here is a view of the flight line and you can see there's an interesting variety of them, and variety is the word, there was everything from WWI biplanes to a six motor electric Convair bomber and some large aerobatic types, but the best was definitely the RE 8 of John Herberts.



He also had a Flair Fokker DVII with hand painted lozenge camouflage but the RE 8 was better by far. He told me it was the first serious scale plane he had built and it was from plans.

He had used the full size one in the Shuttleworth collection for the details and it showed.

The lacing on the fuselage was perfect and the dummy motor very impressive. He had routed the Laser 100 exhaust through the vertical pipes of the model so smoke came out in a scale fashion, those of you in Oz may remember David Tresseder's BE 2C (essentially a smaller version of the RE) that had a similar feature.

The sprung tailskid was a little gem and the elevator horns even had the wooden inserts in the metal just like the big one and the fittings on the interplane struts were nothing short of works of art!

These photos don't do it justice nor, of course, show how good it looked in the air. Like the real one it was hardly aerobatic but looked so good coming by in low, slow passes.

Here's another pic just to show some more fine detail and also the Fokker.

All those lozenges were hand drawn and brush filled in.

The curious markings on the tail are not some obscure camouflage pattern but the shadow of the chicken wire fence!

And so to the full size ones. If you want to find out everything they have go to the website www.

Here's a few of my favourites.

Firstly the Magister which I modelled mine on in ummmmm … I think it was 1985. I remember writing to the curator at Shuttleworth to confirm their one never had wheel pants and also to check the colour of the gas panel on the top of the rear fuselage.

That's the diamond of special paint that was supposed to change colour if you flew through a cloud of mustard gas (I would have thought the stinging eyes and hacking cough were a bit of a giveaway!).

He wrote back "it's either a greenish shade of yellow or a yellowish shade of green" so that's what I painted it.

This is their "Grosvenor House" DH 88 Comet that had an undercarriage leg collapse on landing three years ago, it's nearly ready to fly again after many hundreds of hours of volunteer work.

The original U/C was built from very flimsy tube as everything had to be light as possible to allow for the massive fuel load it needed to give a range of nearly 3000 miles (it's unladen weight was 2840lbs and loaded was 5320lbs!).

It won the race to Australia in 1934 in 70hrs 54mins. The new U/C has been "beefed up" a bit.

And then there's the Sopwith Triplane.

This has been in my "one of these days" book for a long time. I mean everyone makes bloody Fokker Tripes but you don't see so many of these. Still got the same number of ribs to cut out though!

That'll do for Shuttleworth, I have to get back and finish my Zagi.

Actually I have finished it but haven't got a charger for the flight batteries yet. More on that in the next letter.

Remember real aeroplanes have two wings (or three of course) and round engines.

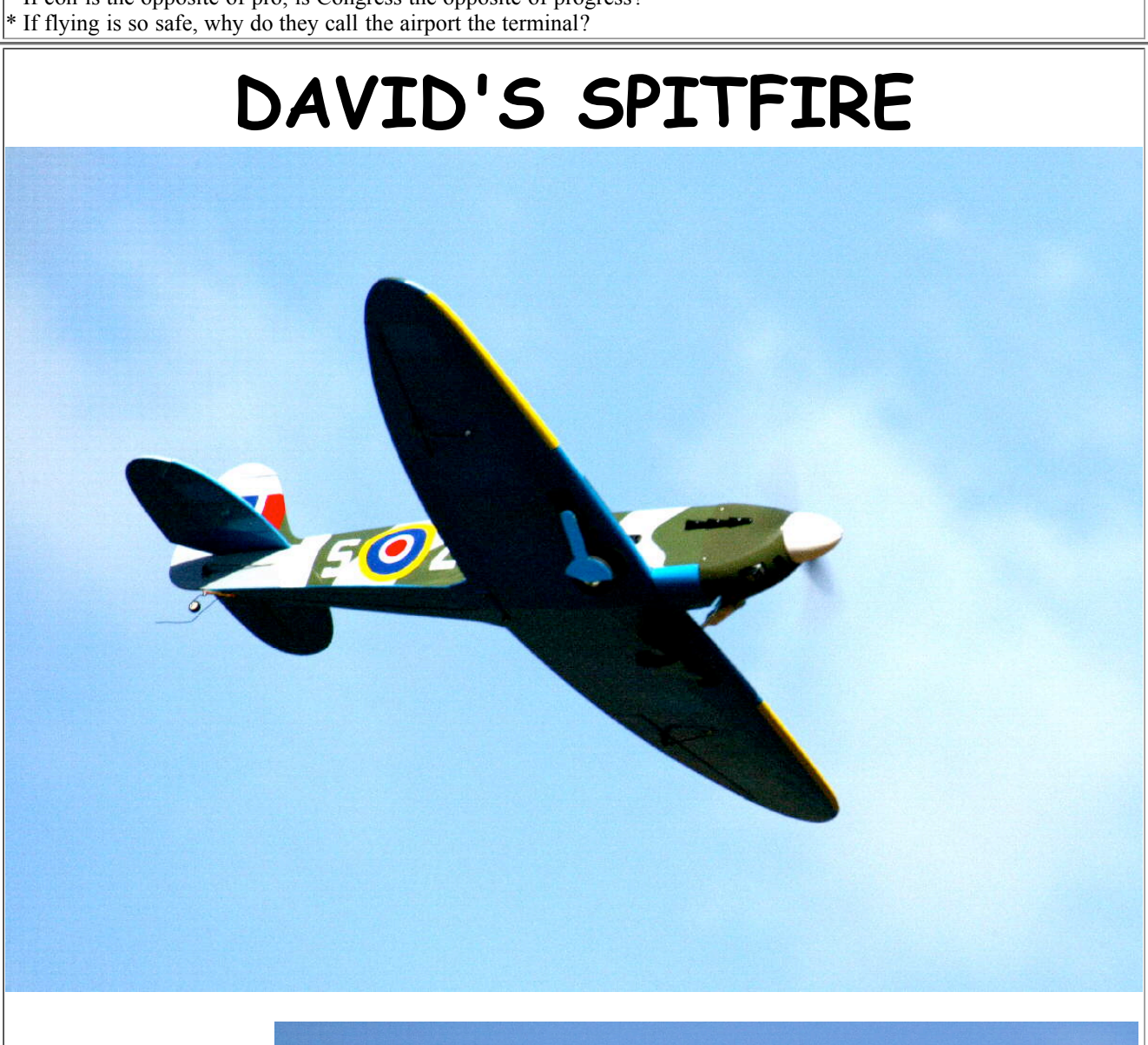
Regards,

Mike

EVER WONDER ....

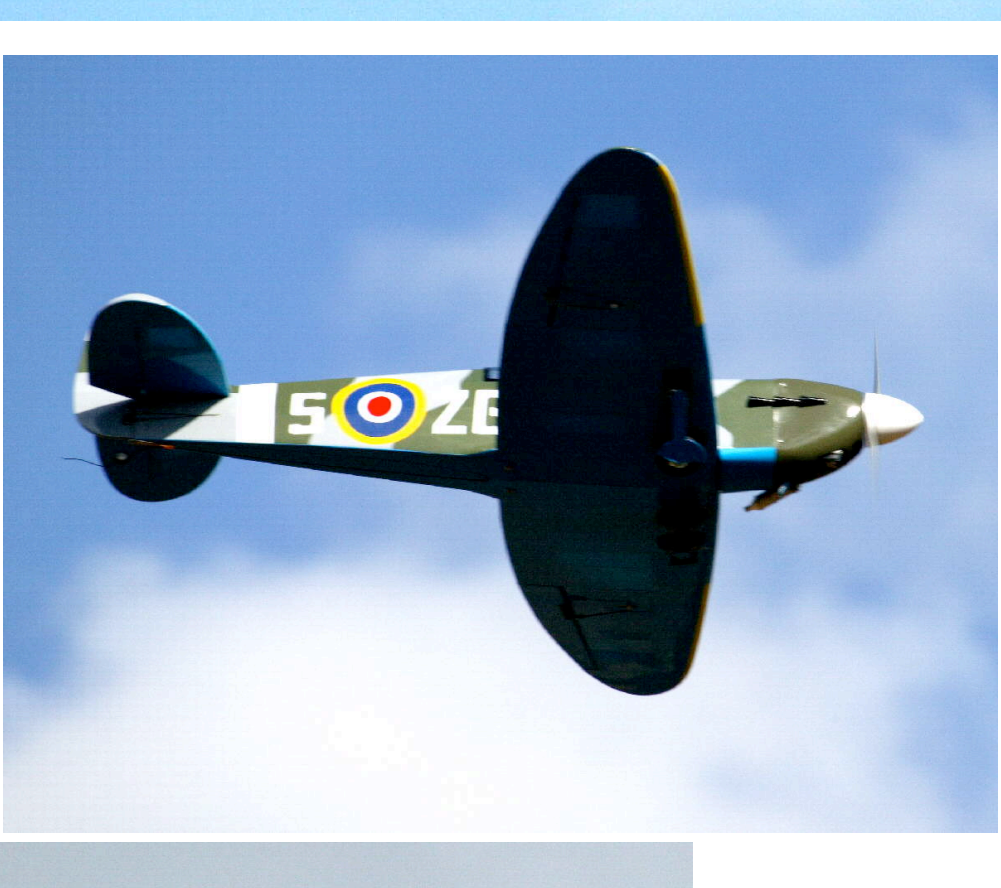
* Why the sun lightens our hair, but darkens our skin?
* Why women can't put on mascara with their mouth closed?
* Why don't you ever see the headline "Psychic Wins Lottery"?
* Why is "abbreviated" such a long word?
* Why is it that doctors call what they do "practice"?
* Why is lemon juice made with artificial flavor, and dishwashing liquid made with real lemons?
* Why is the man who invests all your money called a broker?
* Why is the time of day with the slowest traffic called rush hour?
* Why isn't there mouse-flavored cat food?
* Why didn't Noah swat those two mosquitoes?
* Why do they sterilize the needle for lethal injections?
* Why don't they make the whole plane out of the stuff that indestructible black box that is used on airplanes is made of?
* Why don't sheep shrink when it rains?
* Why are they called apartments when they are all stuck together?
* If con is the opposite of pro, is Congress the opposite of progress?
* If flying is so safe, why do they call the airport the terminal?

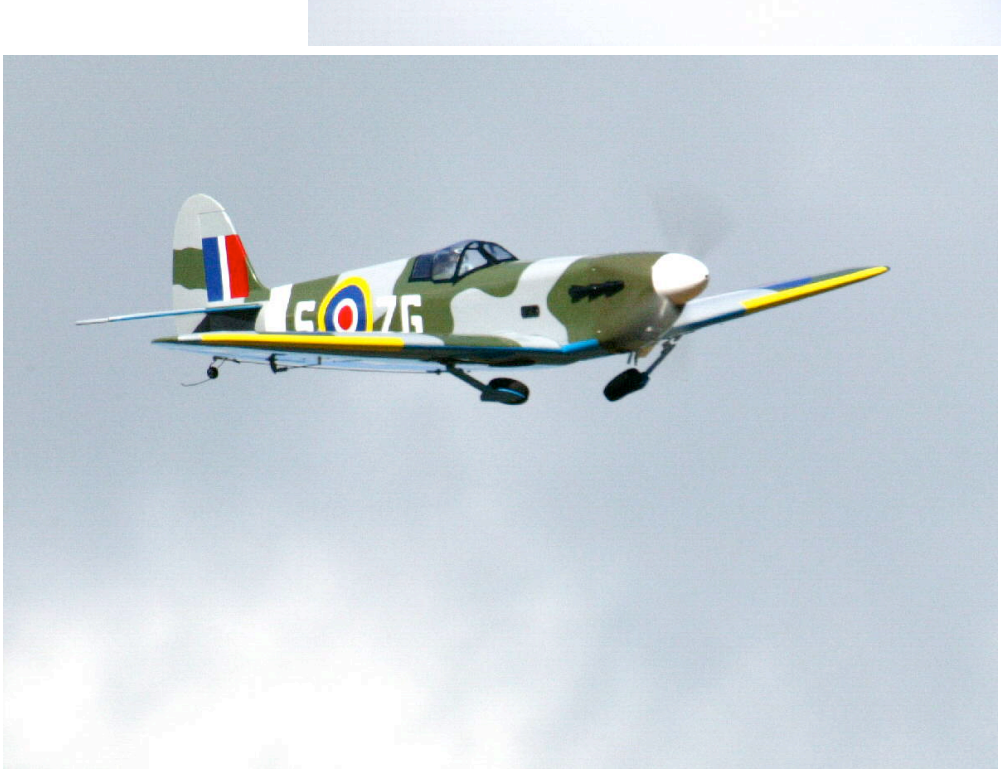
DAVID'S SPITFIRE



David Foster provided us with a collection of excellent photos of his 1/7 scale Spitfire which is powered by an OS 91-FS.

The unmistakable wing shape is well shown in our selection of the brilliant series of photos taken by Rod Jamieson.



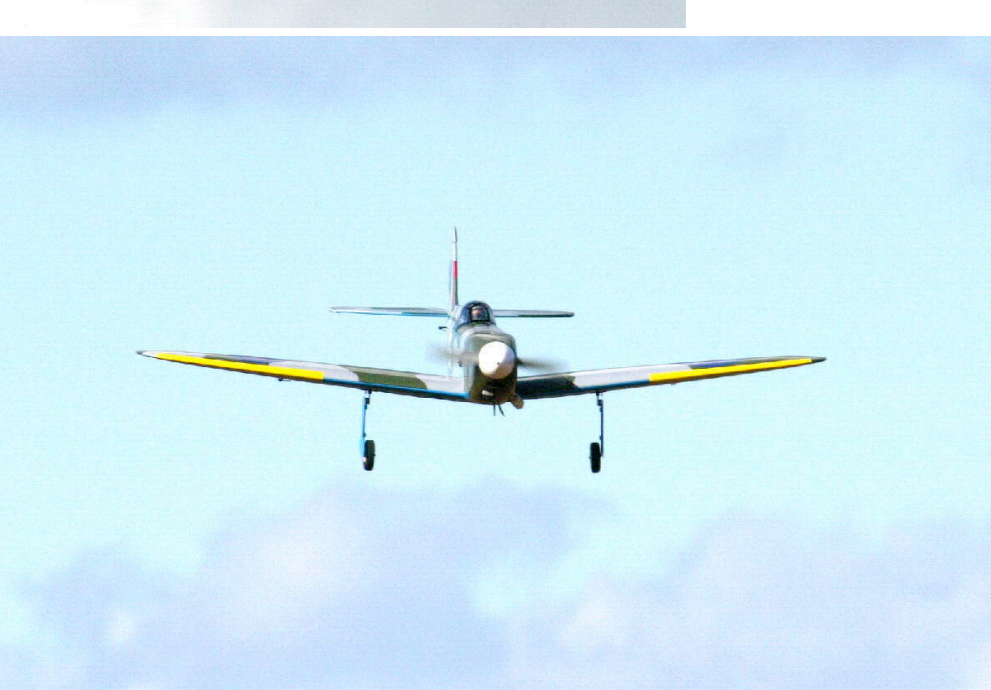


The model is from a Sportsman Aviation kit and handles beautifully even down to very low speeds and has no nasty vices.

David loves doing strafing runs down the field with a victory roll to finish.

Our photos catch the Spitfire with its landing gear being lowered (above) ...

... almost back on terra firma on final approach with the landing gear locked (right) ...



... and finally the model is about to be expertly brought in for a perfect "scale" landing (left).