

MAX FAX



Journal of the D. C. Maxecuters

... home of the dreaded POTOMAC PURSUIT SQUADRON of the Flying Aces Club

Editor: Stew Meyers

SEPT-OCTOBER 2004



MOST OF THE 109 EBENEZERS THAT SHOWED UP AT OLD WARDEN THIS YEAR

COMING ATTRACTIONS

Saturday, September 25th

Brainbuster Fall Contest Cancellation

We have been forced to cancel our fall contest because of problems generated by the security fencing at the Dinwiddie County Airport.

Saturday, October 16th 9AM - 5PM

Sunday, October 17th 9AM - 3PM

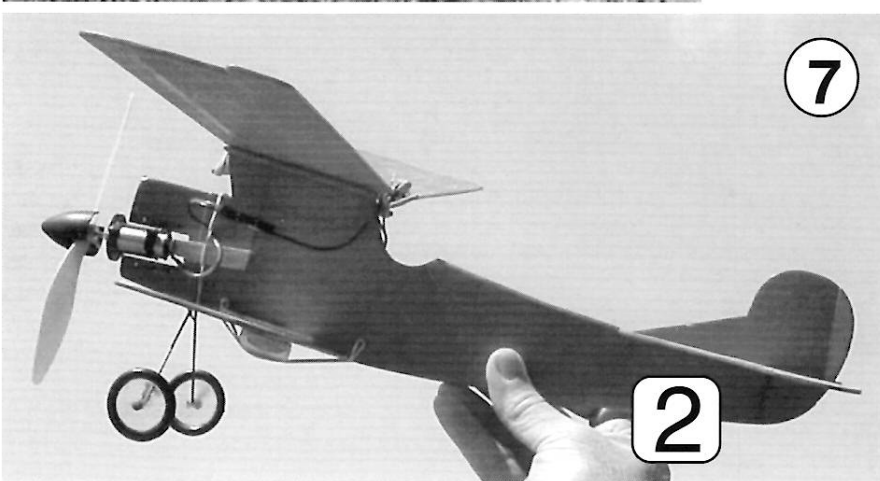
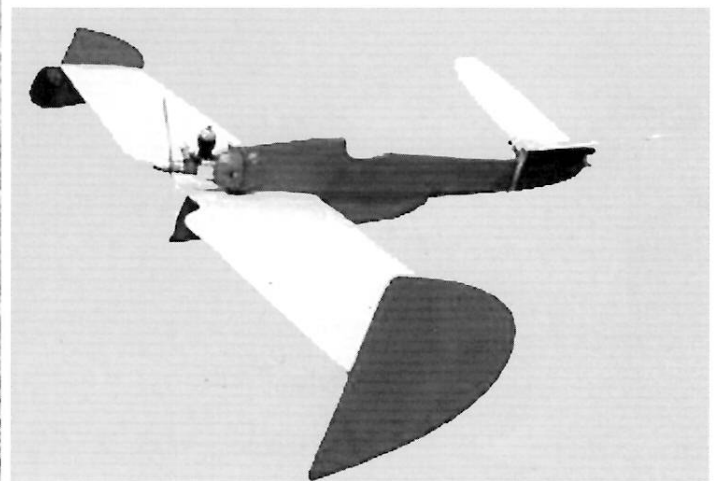
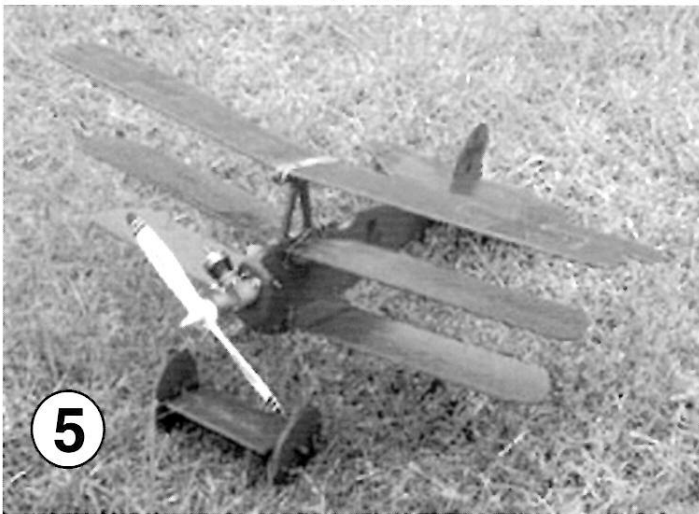
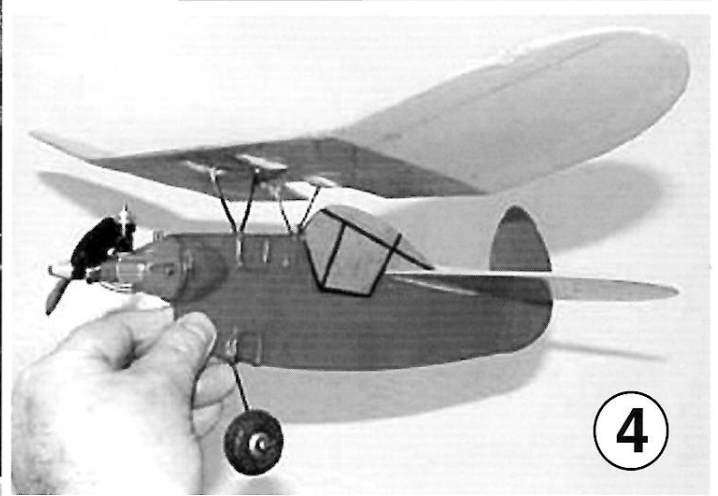
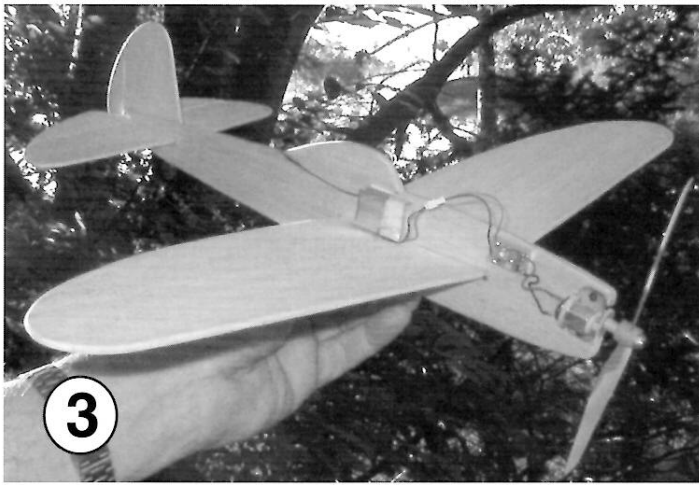
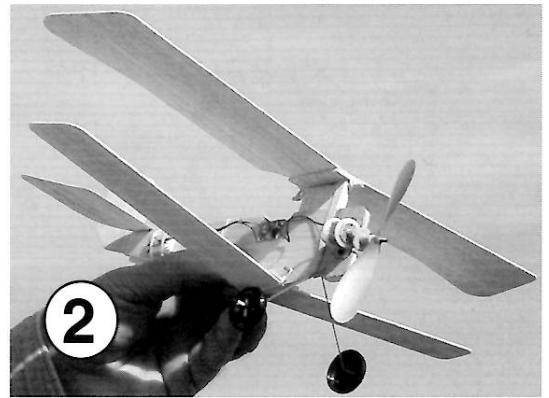
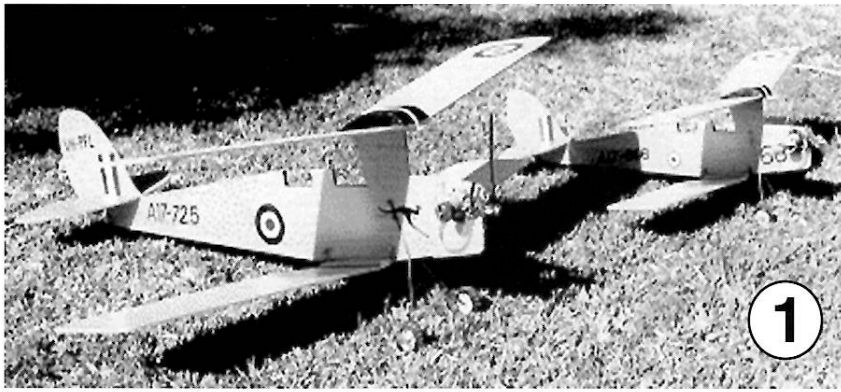
FAC CONTEST AT BARRON FIELD, WAWAYANDA, NY

Tom Hallman 610_395_5656, John Houck 610_488_6235

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Check out the web site for information on flying in the National Building Museum.
There should be some November flying dates.

<http://www.his.com/~tschmitt/>



Ebenezer Issue

Stew Meyers Editor

Well you guys are going to have to put up with another of my excursions into modeling esoterica. Tom Schmitt brought an issue of *R/C Model Flyer* to lunch at Corkies. I was quite taken by a full size plan of an Ebenezer version of a KielKraft control liner *The Champ* called *EbenezerTheChamp* in this issue. This was powered by a Cox 010. I borrowed the issue scanned it and built the *ElectricEbenezerTheChamp* that week end and flew it at the sod farm the next. I also electrified an Ebenezer D-7 I had built years ago for Diesel. Both flew very well, so now I am on an Ebenezer kick and am dragging you along.

Hal Howard forwarded me an e:mail from Bert Streiger, the originator of the Ebenezer with a photo of an Ebenezer Festival in England, Old Warden Aerodrome, on May 16th with 109 entrants. See the cover.

I have corresponded with Bert and Ken Sheppard the editor of the *Flyer* who is an avid Ebenezer supporter.

In this issue we will feature the "Original Ebenezer" and Ebenezer Tripe by Bert Steiger, an Ebenezer Flea, the Rezenebe Canard by Jim Fullerton, Ebenezer TigerMoth by George Carr, the *Electric-Ebenezer-The-Champ*. And of course as many articles on the Ebenezer as I could find.

The Fokker D-7, and Nieuportenezer will have to wait for another issue. If you can't wait, John Watter's Ebenezer DVII (plan no:MAG24) is still available from the Nexus Plan service or at least it was in 1998.

Now you may well ask what is an Ebenezer?

George Carr of Australia says:

The Ebenezer type of model was started quite some time ago- in the 50's, when Bert Striegler in the US designed the Ebenezer biplane, followed by quite a few types over the years including a seaplane (his favourite), and the Fokker triplane. There have also been an Ebenezer Flea (based on Henri Mignet's Flying Flea series of light aircraft) and the Rezenebe, which you can imagine is a canard! Those were designed by Jim Fullerton in the 60's. There was a Fokker DVII in the 80's, and more since. Ebenezers are characterised by flat plate wings, profile body and use small (0.5cc) motors, usually the Cox 020 Pee Wee. Really, they are caricatures of aircraft. Bert designed the original to be easy to build, to fly well, but not well enough to thermal and fly away! There is more about Ebenezers, including the plans, in a 1998 issue of *Aeromodeller* magazine.

I found the Pee Wee overpowers the models. To control the climb, the fuel mixture is set rich to keep the rpm down, but as the fuel runs out the motor speeds up and the models do some crazy antics. This can be fun, of course, and you can trim them to be quite safe and entertaining. At the same time it would be nice to control the motor's power output, so you can get slow, long climbouts. One answer is to use a diesel as they are easily adjusted by changing the compression ratio. (That is the method I originally used on my D-7 before going to electric. -Stew)

John Asman of Australia says:

Ebenezers constitute a generic family of extremely simple (some might unkindly say crude and ugly) small free flight models having both profile fuselages and flat wings. They are typically powered by small diesel engines of about 0.5 cc capacity or by .020 Cox engines. Occasional examples are fitted with the rarer .010 Coxes and the more ubiquitous .049s are seen on those Ebenezers that have been scaled up appropriately. Ebenezers are typically derivatives (perhaps caricatures is a better word) of various famous early planes and are usually given an "enezer" name ending, thus Spitzenezer and Fokkenezer, for example.

Electric Ebenezers

A 4:1 geared high voltage N-20 with a 5 or 6 inch prop will replace a Cox .010 and a GWS IPS-S1 with a 7-6 prop will replace a Cox .020 nicely in powering these Ebenezers. Using a 250 mahr Li-Poly keeps the weight down and using a timer will keep the Ebenezer from being permanently raised to the heavens. Now it so happens that DJAerotech makes a simple gearbox for the N-20 for their "Road Kill" series of R/C models. It is designed for profile mounting and a natural for an Ebenezer. There are better gear boxes, but none easier to use. For a further treatise on the subject see my Electric Flight Column in the November issue of *Flying Models*.

Page 2 Photo Caps

1. George Carr's Tiger Moths the one in the foreground is a 133% blow up of the plans in this issue for a large diesel.
2. Stew Meyers 15" Nieuportenezer with a "Road Kill" power system. He really needs to gussie it up with insignia. Plans will be in a future issue if interest is shown.
3. Electric Ebenezer-the-champ. Plans and electric conversion in this issue. 20" Profiles of the Comet E series would also work well with the "Road Kill" N-20.
4. Jim Fullerton's Flying Flea plans in this issue. A "Road Kill" N-20 would work well to replace the Cox 0.010.
5. Bert Striegler's Tripe, plan in this issue, a candidate for a GWS S-1 motor.
6. Jim Fullerton's Rezenebe again the "Road Kill" N-20 would work well to replace the Cox 0.010. Jim uses more of an airfoil than most Ebenezer Builders.
7. Stew Meyers Fokkenezer with GWS conversion. Couldn't find the plans for this issue.
8. Ray Rakow and the original Ebenezer.

RAISE YOUR EBENEZERS!

Bert Striegler built the first Ebenezer in 1954, it was a great success, and Ebenezers have been popular ever since. What constitutes an Ebenezer? - That's easy, and you can design one of your own, after the character of your favourite plane!

George Car has been fondly looking back at the phenomena.....

SIMPLE AND 'CUTE' ...

It was the early fifties. Bert Striegler wanted a small, sports model that was able to handle the power available from the tiny glow motors then just coming out. In his own words, "The original idea was a simple freeflight model that could be made by any kid, using nothing but 3 inch wide sheet balsa. An Ebenezer must be all flat sheet balsa, no built up structure, no airfoil, all 3 inch sheet. It must resemble a full scale aircraft and be "cute" so as to attract youngsters. No covering to be required. Flat plate wings, for simplicity and to restrict thermal performance. Compact size for small engines. Optional landing gear. Easily trimmed and able to handle a fair amount of power. No real restriction on types of designs.

The result was a sheet balsa model which flew beautifully. Indeed, he found that it did handle the power well and after flying it one Sunday morning presently found himself in church, full of the joys of having successfully flown an own designed model. The model still needed a name. Then the sounds the hymn "Come, Thou Font of every Blessing" by Robert Robinson filled the church and Bert hears the lines "Here raise mine Ebenezer: Hither by Thy help I'm come; and I hope by Thy good pleasure, safely to arrive at home." He almost fell out of the aisle, here was the name!

The model received a lot of attention at his model club, the SAGMAA in San Antonio, Texas where Bert was in the USAFF and many of the club members made them. It was so popular that they ran a duration event for it, the score being a ratio of the flight duration to the power run. As the model continued in popularity, Bert and friend Ace Lansford began making and selling kits. After hand sawing and selling 400 of them, which sold like hot cakes they stopped when they realised that, for a model where the cost of the box was greater than the contents, it was not going to be worthwhile!

AEROMODELLER AND EBENEZERS

The plan appeared in Aeromodeller in 1958, and seemed to hit a chord worldwide. In England, they were built in such numbers so that at the following Nationals, there was a scramble event for the model. The Ebenezer Biplane was followed by another two from Bert, the Fokker Triplane (AM, Feb 64) and Bert's favourite, the Ebenezer Flying Boat (AM Nov 64). Ebenezers were built in large numbers and were popular all around the world, and there were Ebenezer only scramble events. Bert had a particularly light model with a very good Cox Thermal Hopper. He used to keep it in the boot of his car, and at contest meetings, would start it up out of general view, and release it from there it amazed all the power fliers with its

unbeatable climb! The model was a standard Ebenezer, except for a little more downthrust.

Although the later two Ebenezers were not as popular as the original, Bert had definitely set a trend. Aussie Jim Fullerton took up the theme and published the Ebenezer Flea (AM Dec 65), a profile caricature model the Henri Mingnet 290 series Flying Flea. Jim had a fascination with the Mingnet light aircraft and also with model canards. Realising that Ebenezer spelt a sensible word when written backwards, he designed the Rezenebe, a pusher canard Ebenezer (AM, Dec 66). After that said Jim, "I ran out of ideas which was probably just as well for the aeromodelling community in general!". While Bert doesn't have the original Ebenezer nor any photographs of it, he still has the original Flying Boat. Jim has both the original Flea and Rezenebe, although they don't get much flying these days, whilst my original Ebenezer Moth, still with its AE 0.5 motor must have hundred of flights, and still gets a regular airing - durable these Ebenezers!

C/L AND R/C EBENEZERS

Such an attractive and durable model is likely to find control line adherents and indeed many have been made. Only modifications needed are to remove the wing incidence mount a bellcrank on the fuselage to operate the elevators leadout guide on the lower wing tip and remove the engine downthrust - Oh, and use stronger bands to hold the wings on! My own Ebenezer D7 with a Cox Babe Bee is a good flying model, and when the motor really unloads (use a 5 1/2" prop) is quite something to get the adrenaline going! Bert, who is also known for his R/C soaring designs as well as sport F/F models, has an R/C Ebenezer powered by a PAW 80. It has a 3/4" wide fuselage to house the radio gear (wonderful, this small gear!) and is a delight to fly. I have a scaled up Ebenezer Moth (to 34" wingspan) powered by a Frog Vibromatic and with standard two channel radio gear which interestingly enough, flies just like an Ebenezer - that is, it has a very good climb, followed by a fairly steep glide and it doesn't penetrate well! The original Ebenezer is about the ideal size (20" wingspan) for the type of construction, although scaling up to around 30" still retains the robust stiffness. Bigger than that, and the wings tend to be too whippy - the R/C Moth definitely waves her wings frantically if you attempt any sudden movements! However, for those lovely still evenings, it is unbeatable - fill her up, start and launch. Leave the transmitter on the ground to let the model fly freely up, and let the model climb till just a speck in the sky. After the motor has cut, use small control inputs to bring it back for a gentle landing - pure magic!

ROLL YOUR OWN !

Got a favourite plane, but can't be bothered making a good scale model of it? The Ebenezer format is the way to go! Begin with scale drawings or a 3 view and photocopy up to 20 to 30" wingspan (for motors 0.5 to 1cc). Draw on the fuselage profile the mounting position for the motor, including 5 to 7 degrees down thrust (with respect to tailplane datum), and wings with 3 degrees incidence. The fuselage profile can be cut from 1/4" balsa, the wing, tail plane and fin/rudder from 3/32", and some ply motor mount. Don't forget to give the wings 7 degrees dihedral (or for calm weather only flying as little as 3 degrees). You might also need to increase the tailplane and fin/rudder area, depending on the prototype, to be safe. Scale the tailplane area up to about a quarter of the wing area, and the fin/rudder to about one tenth.

They can be very realistic in flight, from a distance. Best comment I heard was after a one hour scramble event in which I had been flying an Ebenezer Moth- a fellow who had been watching the whole event from about 100 yards away, came over and examined the model - "Oh, how disappointing!" he said, "to see that's only a profile model!" The Ebenezer, a marvelous formula for sports free flight models, that continues to be popular. Indeed, as Bert says, "Many times have I raised mine Ebenezer, and so have a whole lot of other guys!"

Lift Your Ebenezers to the Heavens! or "How the Ebenezer got its Name" by Bert Striegler 1954

The name really did have a religious connotation. I had built and flown several but had not come up with a name for the concept. Then one day while I was sitting in church listening to a very dull sermon, my mind naturally drifted back to model flying.

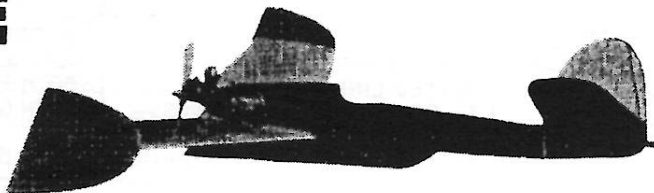
Then they said to open our hymnal to #400 (a Methodist hymnal) and sing, "Come Thy Fount of Every Blessing". In the first line of the first verse, it says, "Praise the mount, I'm fixed upon it" and my warped mind immediately said, "Aha, a slope soarer?". This was followed by the first two lines of the second verse, which went on to say, "Here I raise my Ebenezer, hither by thy help I've come."

Now you can clearly see where this is leading - thus the name Ebenezer was born for the concept. The third line clinched it by saying, "And I hope by thy good pleasure, safely to arrive at home."

He climbed a mountain, launched his Ebenezer and found it safely after the flight. That woke me up, but by then the sermon was finished. My wife commented that I had not been paying attention, but I assured her that I was simply listening on another plane - she got that one.

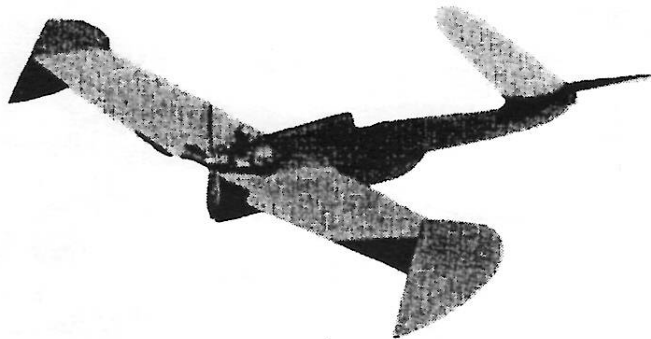
➔ REZENEBE

**Whichaway? Whataway?
Thisaway for flying fun**



A lively 18 inch span tail-first free flight model for .010 engines designed by Australian down-under-tail-first exponent, JIM FULLARTON.

It all started one day when we were playing around with that wonderful word of Bert Striegler's, and found out it could be written backwards. After that discovery, there was only one thing for it. There just had to be a canard **EBENEZER**. What is more, it had to be a *real* canard, not one of your half-baked tractor efforts, but a genuine tail-first, propeller-last *pusher*, like they used to build back in '09.



We will not bore readers with a detailed description of construction, beyond a reminder to use light material (and not too much paint either) behind the C.G. so as to minimise the amount of nose ballast required. The foreplane has a thicker section than the wing and has a turbulator to prevent premature stalling.

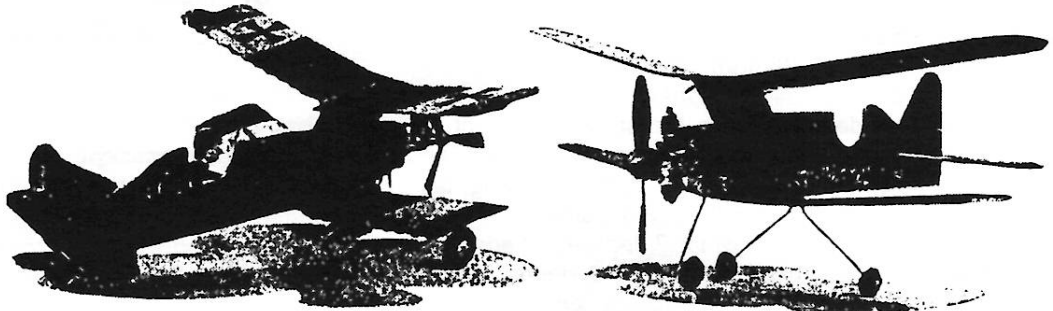
To make Mr. Cox's tiny powerhouse "Push" instead of "Pull", we need a left hand propeller, which is bent from dural. This will be quite safe provided you do not use soft aluminium, and replace rather than straighten it should it ever become badly bent (*most unlikely on a canard.*)

Incidentally, with a new motor and a pusher prop., you may have some trouble with overheating until it is run in. Correct location of the C.G. is absolutely vital, so when completely painted and assembled, balance at the point shown by cementing lead strips to the elevator platform. The wing is fixed, but the elevator is attached by rubber bands, and the angle may be varied by packing as required to get a satisfactory glide trim. A small celluloid tab may be used on the left fin to induce a wide left glide turn. The *left* thrust offset shown should produce a safe *right* turn (things are reversed on a canard) under power.

Work up to full power gradually, (not too much fuel in the tank either) and your model will soon be turning in flights which will be all the more spectacular because it is apparently flying backwards!

EBENEZER

an all-sheet
balsa quickie
for free flight
with small engines
by B. C. Striegler

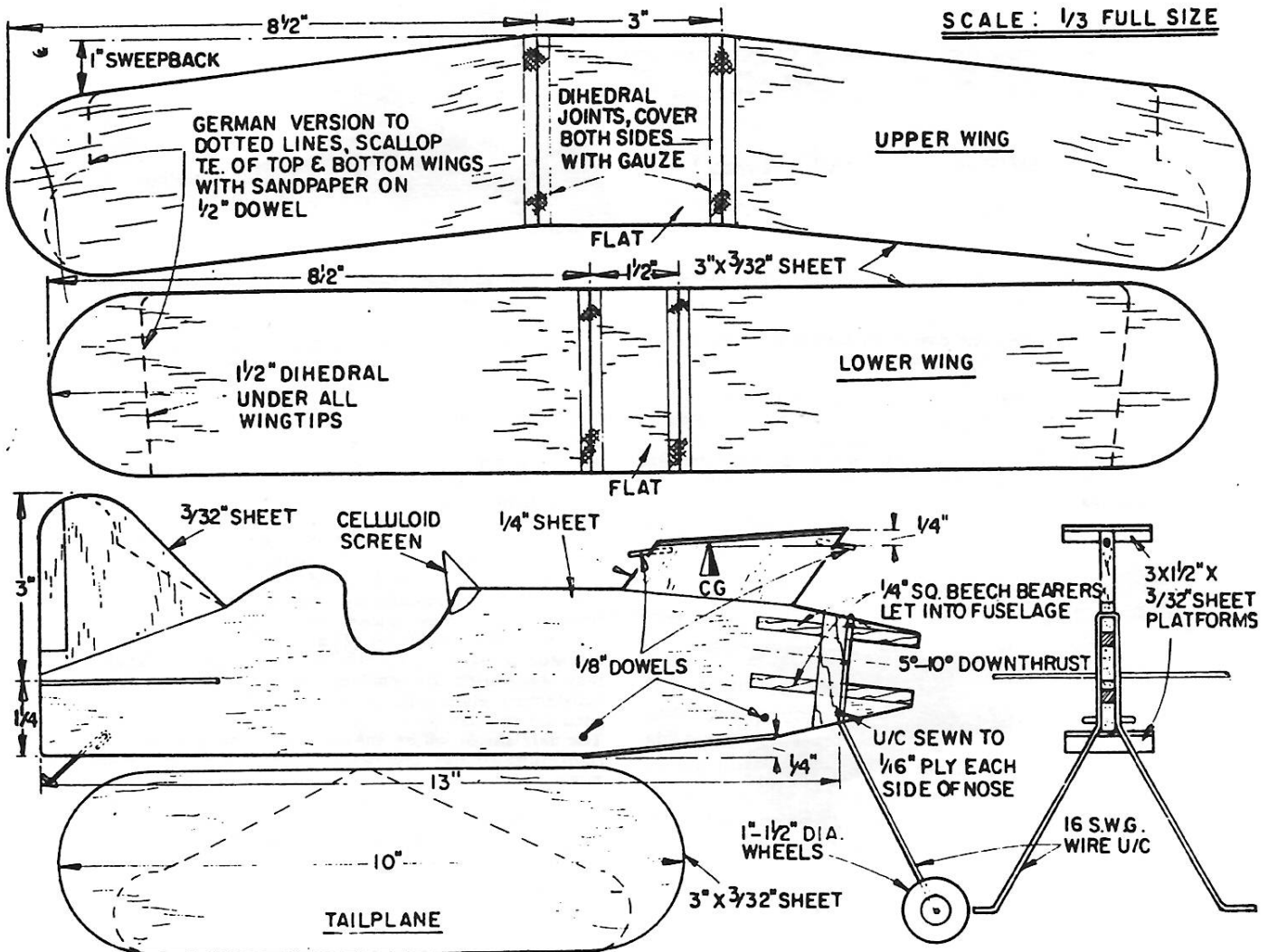


WITH THE WORST of the northern hemisphere winter behind us (we hope!) now is the time to start thinking of a new sport job to fill in time on the flying field. What better than this pee-wee solid sheet number that can be knocked out overnight from a few sheets of standard 3 in. wide balsa sheet?

Bert Striegler's prototypes seen above have a flight log which takes them back over three years of constant activity, amassing no less than 400 flights in the case of the "German" version with the Fokker type tail. With tricycle or standard undercarriage, radial or beam mounted engine, this little 20-in. span biplane will surprise you for its performance in spite of the flat plate aerofoil.

Plans below are one-third full-size, simply multiply the various measured dimensions three times and mark out directly on to balsa, using the actual measurements quoted as a guide. There's no need to be fussy over being exact in shape, just as long as you get those wing and tail angles right. The models shown above have flown on O.K. Cub .039, .049, Torpedo .035, Spitzzy .045, Allbon Dart and Merlin, so it's safe to assume that anything in the way of diesels from a Kalper to a Frog 80 will zoom Ebenezer aloft like a homesick angel.

P.S.—It takes off, too—after a long fast run, so if there is a runway on your flying field you can try some racehorse starts with your clubmates.



EBENEZER CHAMP

'Gray' of the Small Model Association

First introduced in the late 50 s, the Keil Kraft Champ must rank as one of the best-loved control line trainer models of all time. Its simple, all sheet construction and a power range that allowed the use of a wide variety of 0.8cc to 1 cc motors, made it an ideal introduction to CL for younger modellers of the day.

In the forty-plus years of Champ production, it must have given thousands of would be pilots their first experience of controlled flight. I was one of them! I first encountered the Champ in my school model club, about thirty five years ago, where it had been adopted as the school s standard trainer.

When my own version, with its mighty DC Bantam .049 and on 30 ft Terylene thread lines, flew straight off the board and lasted an entire three-minute tankful of fuel, it was my first major modelling success and I was hooked for life!

In this same club was a smart pupil who had recycled the remains of a crashed Champ. All the controls had been removed and the flat wing was banded onto a stripped-down fuselage. A knock-off motor mount with a Cox Tee Dee .010 was similarly lashed onto the nose. All the flying surfaces were given trim tabs that were delicately adjusted before each flight.

With its tiny Cox screaming, this device was hurled vertically like a chuck glider and for about thirty glorious seconds would perform frantic, crazed aerobatics before its lack of dihedral got the better of it. It was the most exotic model I'd ever seen and it planted the seed of an idea.

During the 1970 s, I quite fancied the idea of a freeflight Champ again and I built a standard-looking model with what I thought would be advisable mods: some wing incidence and dihedral. I fitted my Pee Wee .020 and was amazed to find that it flew really well. It even flew away on one occasion and spent a night hiding in crops. Another version, this time with a Tee Dee .010 was built in '74, it flew for a couple of seasons before a confrontation with some iron railings...

EBENEZER CHAMP

When the Ebenezer class, with its sound values of all-sheet ruggedness, started becoming popular, the time seemed right to revive the FF Champ concept. The resulting model flew in both the '03 and '04 mass launch events at Old Warden and gave a good account of itself on both occasions.

So how do we 'Ebenezer the basic Champ design? Very little to it! Select some nice, warp-free medium sheet balsa for all components and cut out a 'kit' of parts first. All good Ebenezers get by without any of this new-fangled 'airfoil' business and use only flat-plate surfaces. Round off the edges of the wing and tail surfaces then cut the elevator and rudder free as trim tabs, hinge these with aluminium strips cyanoed in.

Carefully bend up the 16 swg undercarriage and file a small notch just ahead of the LE of the wing slot to accept it. Drill holes where shown through the fuselage and sew the u/c in place.

Set the dihedral angle as shown, then jig everything squarely and glue together with slow-setting (30 minute) epoxy. Once set, add the ply disc motor mount and add carved block fairings behind it.

The finish on our Ebenezer the champ is 2 coats sanding sealer, 2 coats 50/50 dope/thinners, sanded between coats, then a light coat of white car primer, spray can enamel for the colour coat, and finally, Tufkote for fuel-proofing. The logo and pseudo KK emblems on the prototype were done on computer with WordArt and printed onto glossy self-adhesive photo paper - a great way to make custom stickers.

If you've still got a pair of KK streamlined plastic wheels at the bottom of a scrap box - now's the time to re-employ them. I used a pair of racy-looking Williams scale wheels from the SAMS range.

My own Ebenezer the Champ flies as per plan with a tiny extra fraction of combined down and right thrust (a 1/32" sliver of ply behind the top left of the tank mount. The rudder tab has about 1/8" of left trim. I fitted an acetate 'aileron' tab, under the left wing, about 2" x 1/2", bent down about 3/16".

Test flown with the Tee Dee running with its standard prop on backwards to reduce thrust for the first hops, Ebenezer the Champ got away smartly, climbing in quite flat 'CL style circles!

The glide is very respectable too- remember that name and address label (which I didn't...). If you fill the tank, you'll have a long run, or a lost model. I now measure the fuel with a plastic pipette, allowing about 20 seconds for starting time, as I do in the mass launch, then 30 seconds for the actual flight.

I hope you'll try Ebenezer the Champ and have many happy flights. Keil Kraft is sadly no longer with us, but you can't keep a good design down!

This article and plan were lifted from R/C Model Flyer, a great British model mag with more than just R/C.

ELECTRIC EBENEZER CHAMP

I of course, bunged in a Road kill N-20 motor. The Low voltage version and a single Li-Poly produced an anemic flight. The High voltage N-20 as sold by DJAerotech worked just fine with two 250 mahr Li-polys and the 5-3 prop. The GWS LPS B2-A motor geared 4:1 would work as well. A Pico timer completes the flight system. I left the landing gear off as the ship tended to be nose heavy and I did not want to move the batteries any further aft. You could even revert this model to electric control line, if you kept it light and used a GWS IPS-S1 with a 6-5 or 7-6 prop. You would need a flat wing, bell crank, etc and weight on the out board wing tip. I built a smaller C/L version for a dual Road Kill motor. It lasted one flight as my C/L flying skills are nil. Stew

EBENEZER TIGER MOTH

Build this new version of an old favourite which George Car sends all the way from Wagga Wagga in Australia

Ebenezer F/F models have always appealed to me, and I have tried two, neither proving very successful. The problem was the Cox 020 I used is just far too powerful for them - too difficult to trim. Run rich, the flight became haywire when the motor leaned out at the end of the run, while trying to trim for the normal fast run proved an interesting but ultimately impossible task. Some time ago a friend showed me a pair of AB 0.5 cc diesels he had had for some years but couldn't get to run. I soon found they not only ran well, but were quite easy to start. Better yet, like all diesels, they could be made to run quite slowly by adjusting the compression. I found one ideal for the Ebenezer D7 I had made but which couldn't handle the Cox. It seemed obvious another Ebenezer should be built for the other AE, just the stimulus needed to build an Ebenezer Moth!

Tiger Moths were used around the world for pilot training during, and for some time after WW II. They were built in considerable numbers, with over 1000 built in Australia alone. After the war, most of the Moths in Australian service were sold off to private buyers, and still seem to have a definite place in the affection of aerophiles, appearing regularly at air shows. For many years I have meant to build an Ebenezer Moth, and finally did so - if you have felt the same way, here is your chance! I enlarged scale drawings to find they were just perfect for a profile free flight model. The first Ebenezer Moth took a couple of evenings to build and flew 'off the drawing board', its first flight being ideal - gentle right hand climbing circles on power, followed by a reasonably flat left hand glide.

The Moth must surely be one of the best known and most loved planes. Given appropriate livery and with a gentle flying pattern, when flown in the local park of an evening, it will make quite a few heads turn. But do keep the revs down, it would not be dignified for it to fly hanging on the prop. If you'd prefer to fit a bigger or more powerful motor then the plan can be enlarged to suit the 0.75 size diesel or a Cox 020. The plan is such that a 133% photocopy enlargement will fit onto A3 paper, though it will have to be done in 3 sections. For the larger model, the sheet balsa will have to be butt joined to give the width needed. I generally use 75 mm wide sheet (3 inch) so even the smaller versions wings had to be butt joined. My bigger version, powered by a DC Merlin, is as docile as the original and also has a gentle flying pattern - just the thing to chase around the local paddocks.

Construction

Light, stiff, quarter grained balsa would be best for this model, but that's reserved for contest models! Any medium to hard balsa will do, and all of my Moths so far have been built out of the balsa too heavy for contest work but too soft for spars. They have come out right or have

needed a little weight in the tail, so don't worry too much about trying to keep the tail light. Mark out the fuselage profile onto 6 mm (1/4") balsa, and cut out. Next fret saw the engine mount from 6mm light ply, sand and epoxy onto the fuselage. If the only 6 mm ply you can lay your hands on is heavy, reduce the length of the ply motor mount by about 1/3, making up the difference with 6 mm balsa. It's easy enough to align by lying the assembly flat onto polythene sheet on the building board (I use bits cut from shopping bags). While this is setting, mark out the tailplane, fin and four wing planforms onto 2.5 mm (3/32") sheet.

Only one wing planform is given as all 4 are identical. In fact the Moth has the lower wing centre section wider than the top wing, but the difference won't be noticed on the Ebenezer (I understand the sweepback and centre section chord reduction was designed into the Moth in order to allow the forward pilot to be able to abandon ship if needed!) Four centre sections of 2.5 mm sheet come next, two for the fuselage as wing saddles, and one of 6 mm sheet for the top wing fuel tank. To get the dihedral, prop up the wing half with the centre section on the edge of the building board, and sand the wing edge using a sanding block flat up against the building board (as for chuck glider wings). I've not liked the usual partly-cut-and-crack method, which is not suitable here anyway, because the wing sweepback necessitates change of grain direction. Now the wing halves can be glued onto the centre sections, perhaps easiest done by aligning the parts using sticky tape underneath the joint to keep them together. Run glue into the joint, prop up the wing half to the correct dihedral and allow to set.

When each wing is complete, the centre sections will need reinforcing using either cloth or glass cloth (tissue is just not strong enough). Overlapping the centre sections by about 2 cm on each side, and then doping over gives the joint adequate strength. Of course, epoxy would be much stronger than dope, but would then require epoxy compatible paint. The tailplane and fin can then be glued on, checking the alignment by sighting along the fuselage. Next, the top wing spacer and wing saddles, and the model is about ready for painting.

Colour schemes

Moths have been seen in a great variety of colours, especially if you include the ones given first world war markings for filming purposes! I prefer the all yellow of the trainer. If you haven't a favourite way of painting, try one coat of sanding sealer (the sort based on acetone, not mineral turpentine), but don't use dope as it's likely to warp the balsa sheet. Sand when dry and paint using artist's acrylic paints. It will need to be fuel proofed, for which I use polyurethane varnish, good for diesels.

Undercarriage

Bend this up from 2mm piano wire, or bicycle spokes (as I do) to the pattern on the plan. Drill holes as shown and once the paint is dry, epoxy on. I bind the wire onto the ply as shown using paper clips as it allows some

flexing on landing. If you can't find suitable wheels, why not laminate 3 disks of 2.5 mm balsa and carve? If you can fix an electric drill onto a bench, you can easily turn the wheels using sandpaper. The undercarriage is not in the style of the moths, but is practical and provides a convenient grip when starting the motor!

Trimming and flying

The most important things are to get the CG in the right place (mine needed some lead in the tail), and check the flying surfaces for warps. Any warps will have to be removed - try steaming and pinning flat to a building board. If that doesn't work, boil up a kettle, put the wing in an (empty) bath, pour the kettle-full of hot water on and while still hot, pin the wing flat onto the building board. Sounds horrific, but it has always worked for me! I just hope that if you use water soluble glue, the joint will hold up.

Test gliding is not of much use as the gliding speed is a bit high with these flat plate wings. Instead, try a low power flight with little fuel - a 10 to 20 second run is good. This is where diesels come into their own! With the motor running as slow as you can get it, point the model into the breeze, aim at a point on the ground about 50 metres in front and launch gently. A powered glide is great, as you can then repeat but speed up the motor a bit! Aim for a gentle left hand climb followed by a circling glide. Mine have all climbed left and glided right, possibly because of the engine weight on that side.

Further trimming is easily achieved by adding some tip weight to the appropriate lower wing - for example, right wing tip to open out the left hand circles on power and also give right hand gliding circles. I prefer this to using a trim tab on the fin. My Ebenezer did not need engine offset, though the enlarged version did, a washer under each of the front engine mounting bolts did the trick.

Starting techniques

Have you heard of a Mono-moth? Oh - and the secret to starting those little diesels? Same as the big ones I find all diesels hate to be flooded! To get over the flooding, DON'T connect the motor up to the fuel supply to begin with. Rather put a drop or two of fuel into the venturi, and begin flicking. If it doesn't fire after a few flicks, increase the compression a little, then begin the process again. It will fire. Once you can get it to fire and run for a short while with venturi priming, connect up the fuel tank, and it should be a goer! I find small motors like 25% oil, so I stick to 25% castor oil, 35% ether and the rest being kerosene (paraffin). Up to 4% diesel ignition improver helps, too. On seeing other people struggling to start little diesels, I think an important factor is the ability to flick the motor smartly. If you struggle with this, one good solution is to bend up a spring from 1.5mm (1/16") wire, or scrounge one from a Cox motor. Two of the enlarged versions were entered in the Aus. FF Soc. Nationals scramble event this year, which confirmed their robustness, and also showed up another useful trait - they will fly fine with just one wing! Make sure you put it on the top, parasol fashion, though.

...Sept 1995 Aeromodeller

EBENEZER TRIPE

Bert Striegler

IT WAS EARLY DAWN The cough of a rotary engine signalled the attack! The dreaded sauerkraut ace, Baron Manfred Von Ebenezer, was about to, ... Now really, this story should not fool you World War I fans!

This little model will turn in some fine flights, and looks like the real thing in the air. Even if you are a beginner, its construction should present few problems. If you are an expert—have some fun for a change!

Begin construction by cutting out the wings from light 3/32 in. sheet. Glue together the top wing panels with 1-1/4 in. dihedral under each tip. When it has dried, place a piece of waxed paper over the centre section and glue together the centre wing panels directly over the top wing. Use the same procedure for the lower wing. This method ensures the same dihedral angle for all three wings.

The tailplane is cut from light 1/16 in. sheet. Note that the elevators are hinged with soft wire to allow flight adjustments.

The rudder is also cut from light 1/16 in. sheet with the grain running vertical. Two doublers of 1/16 in. sheet are added to the lower edge to stiffen the fin. A small trim tab is fitted with soft wire hinges, and should not be omitted.

Make the fuselage from a straight piece of 3/16 in. sheet. Glue the plywood firewall in place with PVA cement. Add the triangular braces, and then the 1/32 in. plywood landing gear mount. Glue the tail in place. Insert the ply tail skid into a slit and glue firmly. Bend two landing gear struts from 18 s.w.g. wire and force them through the holes shown in the ply mount. Fit the axle and bind with wire to the struts. Solder firmly. Bind the gear in place with strong thread and glue. Fit wheels of 1/8 in. ply. Hold them on the axle with a large washer soldered in place. This will prevent the wheels from wobbling excessively. Cut out the axle wing from soft 1/8 in. sheet, and press a groove into the bottom of it that will match the shape of the axle. Glue firmly in place. Glue the wing mount plates in place. It is best to crack them at an angle to match the wing dihedral.

The centre section strut is made of 1/8 in. ply as shown in the perspective drawing. When completed, glue it to the top of the centre wing. Be sure it is straight.

Ebenezer Tripe original was finished bright red with black tissue crosses. No one knows exactly what colours the feared Von Ebenezer used on his personal fighter, so use any of your choice.

Flight adjustments are very simple. Balance the model as shown on the plans, and hand glide to check. If it stalls, bend the elevators down slightly. If it dives, bend them up. A small amount of left thrust is called for, and the model should circle to the left under power. Use the rudder trim tab to prevent excessive turn. The originals have all used slight right rudder.

...Feb 1964 Aeromodeller

Kudzu Results

FAC Power Scale

1. Tom Hallman Dh2 peanut
2. Chris Starleaf Dh 84 Dragon Rapid
3. Don Srull Voison Canard

FAC Jumbo Rubber Scale

1. Tom Hallman Gadfly
2. David Franks Martinsyde Buzzard
3. John Hauck Fairchild XNQ

FAC Rubber Scale

1. Chris Starleaf Savoia S71
2. Tom Hallman Bleriot 25
3. Dave Mitchell Sopwith Tripe

Old Time Rubber Cabin

1. Don Srull Lanzo 30
2. Walt Farrell ??
3. Don Reed Miss Canada

WW I BiPlanes

1. John Hauck SE-5
2. Don Srull Fokker D-7
3. Claude Powell Halberstadt C2

Golden Age Civilian

1. Dan Driscoll Porterfield
2. Tom Hallman Cessna C38
3. Bob McLellon Stinson SR-7

Combined Racers

1. Walt Farrell Mr. Smoothie
2. Chris Starleaf Keith Rider KR-4
3. Dave Mitchell Howard Pete

WW II Military

1. Stew Meyers Karkov
2. Bob McLellon Brewster Burmuda
3. No third Starleaf and Farrell lost their planes in the second round.

Modern production Civilian

1. Claude Powell Piper PA-20
2. Don Reed Fleet Canuck
3. Walt Farrell Citabria

Dime Scale

1. Frank Rowsome Ong Continental
2. Brad Gless Cessna
3. John Diebolt BAT

Military Low Wing Trainer

1. Bob McLellon BT-9
2. Tom Hallman Arado 96
3. Dan Driscoll Arado 96

Flying Hoard

1. Tom Hallman Mig 3

Special Event Curtiss Robin Dime Scale

1. Claude Powell Comet Robin*
2. Walt Farrell Guillow's Robin
3. Dave Franks Guillow's Robin
*wins the Tool Box

Friday Evening Lake Events

Rubber Cabin non-scale

1. Walt Farrell
2. Bert Phillips
3. Dan Driscoll

Power Cabin non-scale

1. Pat Daily

Rubber Scale

1. Walt Farrell
2. Chris Starleaf Sircorsky S-39

Rubber Stick

1. John Diebolt

Aquatics- R/C Scale

1. Don Srull Donier
2. Pat Daily Moth on floats

Photo Caps P23

1. The Dime Scale Robin Gang competing for Bill Sheppard's tool box.
2. Claude Powell with his winning Comet Robin.
3. Bob McLellon with his Comet E5 P47. This was a wartime two-bit kit. We have scanned the plans from a Kit along with the paper formers and print wood. This will be a future Maxecuter feature as will the other WW2 E's.
4. Chris Starleaf drove 900 miles from Chicago to compete at Kuzu. The D-7 was shot down during the mass launch.
5. John Hauck with his Dave Rees Aristocrat. The fuselage buckled during the golden age mass launch. Dangerous to use a Coconut in a mass launch.
6. Don Srull's R/C Donier Libelle put on a realistic flight demonstration on the lake.
7. Frank Rowsome on plane guard duty. Dan Driscoll and Ray Rakow also manned the canoe.





Some FAC NATs Photos



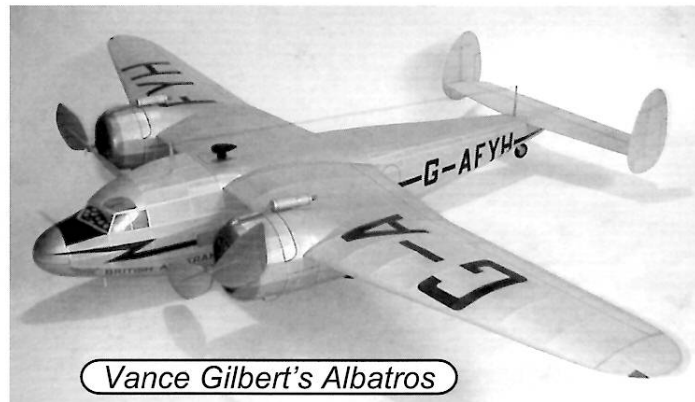
Some Maxecuter FAC Champs



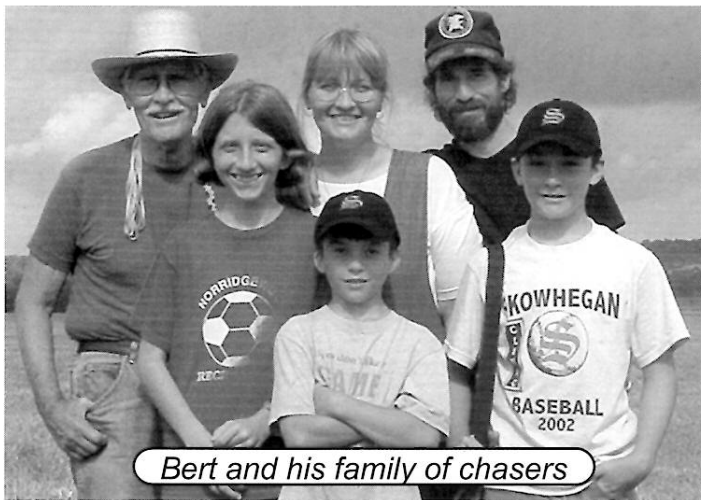
Our Editor and Treasurer enjoying the festivities!



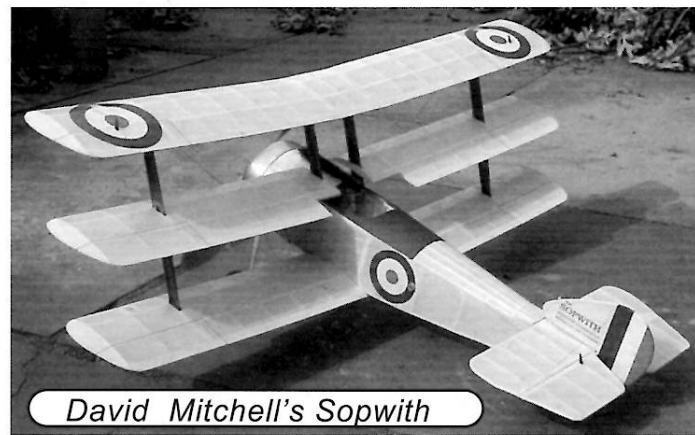
Jane Smith's Powderpuff Entry



Vance Gilbert's Albatros



Bert and his family of chasers



David Mitchell's Sopwith

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 Editor: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817

MEETINGS - The D.C. MAXECUTERS hold meetings at 8:00 pm on the first Tuesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

MEMBERSHIP - Dues for membership in the D.C. MAXECUTERS are \$15 per year for residents of the USA, Canada, and Mexico, and \$25 for all other countries.

Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box below is a reminder that your dues are due. Send a check, payable to the "D.C. MAXECUTERS", to the treasurer, Norm Davison.

PUBLISHING DATES - Six issues of MaxFax are sent each year as close to the nominal dates as possible, but since this is a volunteer publication nothing is guaranteed except that six issues will be sent to all members.

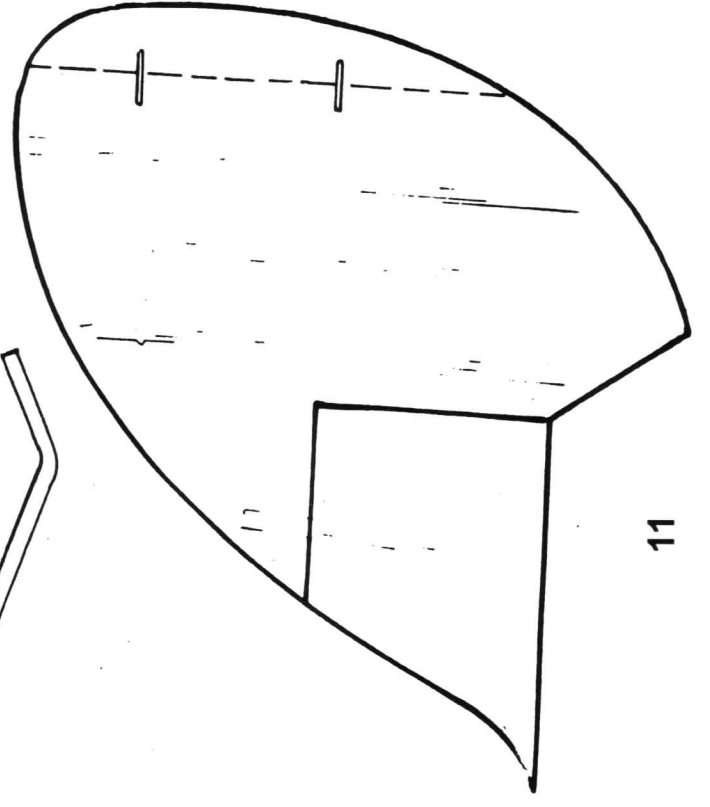
CONTACTS - Material for the newsletter and membership questions should be addressed to Stew Meyers phone 301-365-1749. Email gets immediate attention. stew.meyers@erols.com

Maxecuter web site: <http://www.his.com/~tschmitt/> Your DUES are due

BEND SKID FROM 2mm. WIRE
OR BICYCLE SPOKE & EPOXY
ON.

BEND FROM 2mm. WIRE OR
BICYCLE SPOKE

TRIM TAB IF
NEEDED WITH
SOFT WIRE
HINGES



EPOXY FIRMLY IN PLACE

2mm. DIA. DOWELS.

ANY SUITABLE WHEELS
OR CARVE FROM 3 LAMINATIONS OF
2.5mm. Balsa SHEET.

2mm. DIA. DOWELS

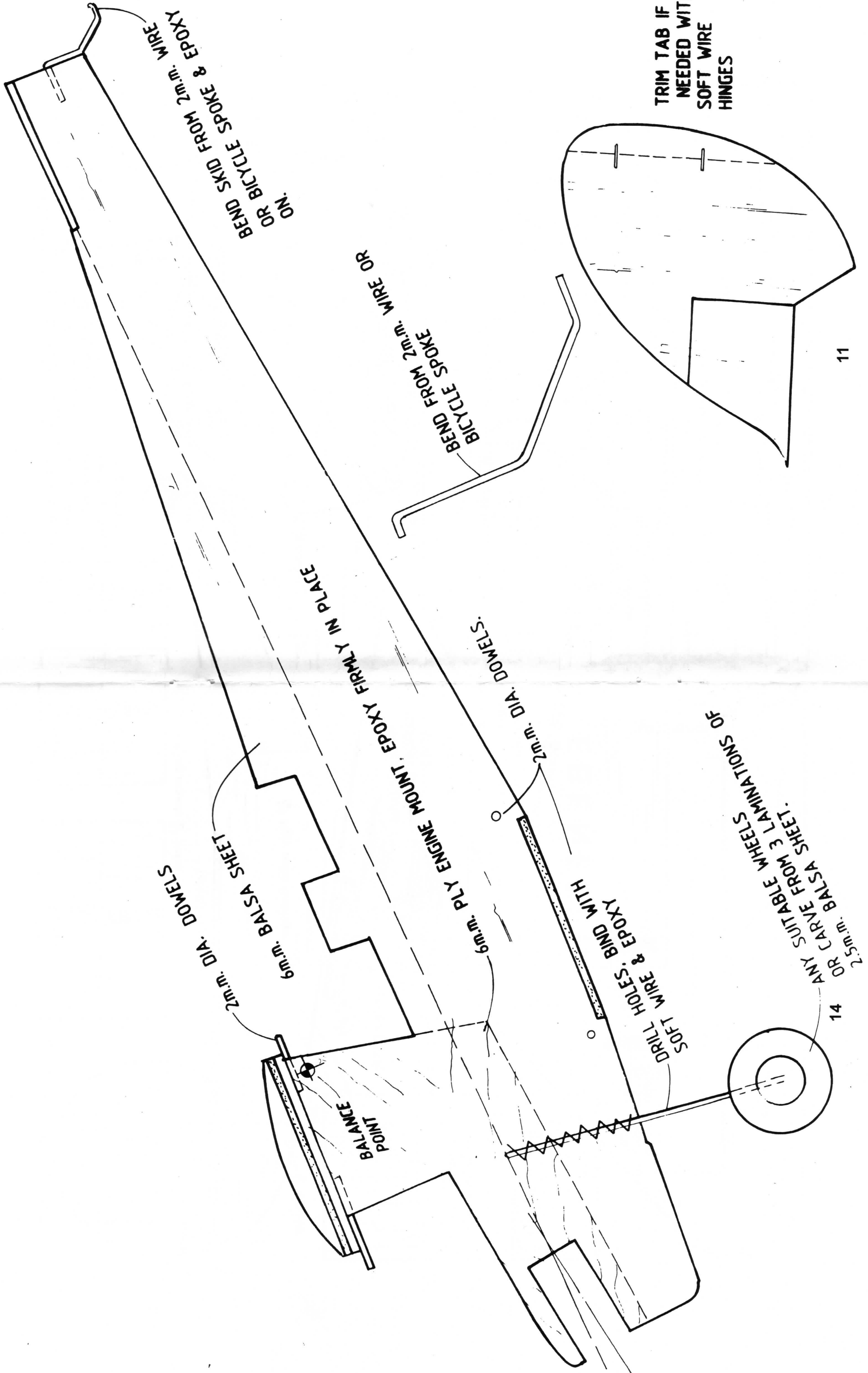
6mm. Balsa SHEET

6mm. PLY ENGINE MOUNT

DRILL HOLES. BIND WITH
SOFT WIRE & EPOXY

BALANCE
POINT

11



TAILPLANE

CUT WING HALVES (4off)
FROM 2.5m.m. (3/32") BALSAM SHEET

30m.m. DIHEDRAL (40m.m. FOR ENLARGED VESION)

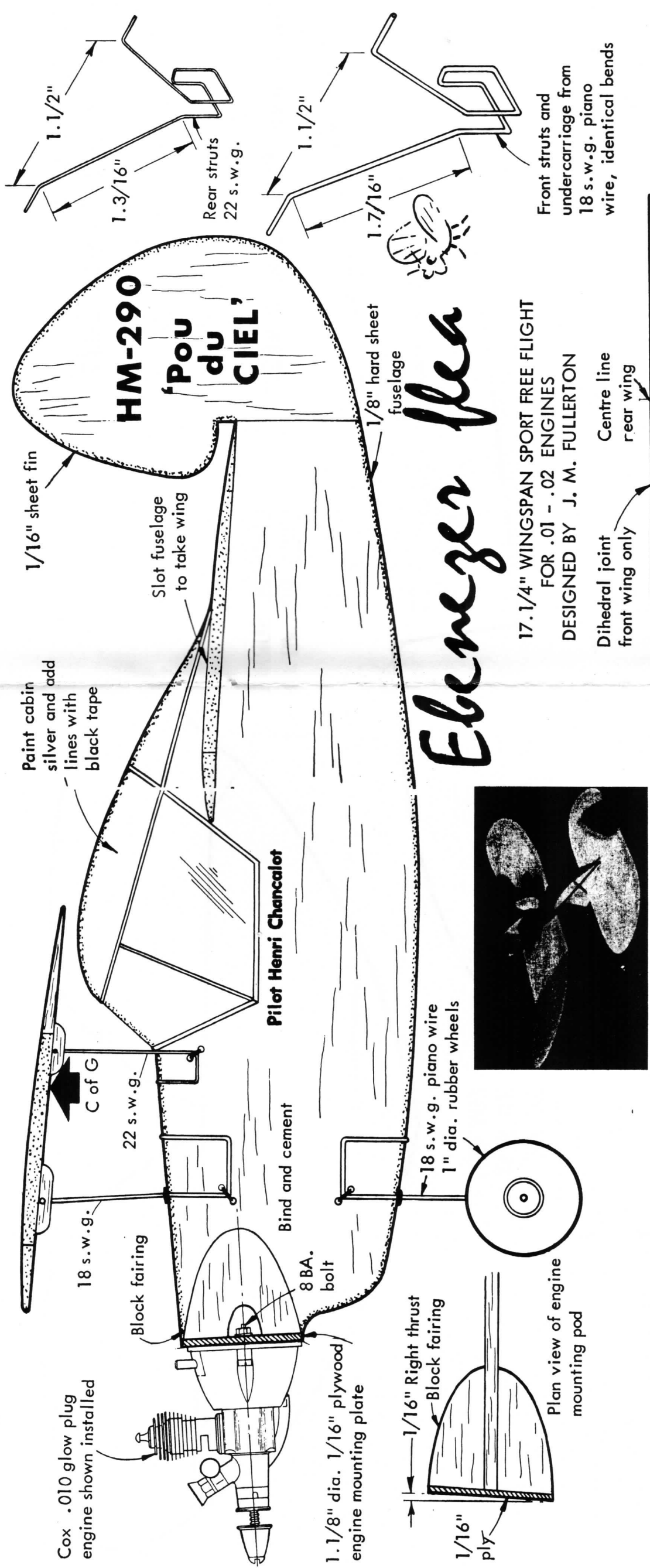
CONTROL SURFACE
LINES DRAWN ON.

CUT OUT
TO SUIT
ENGINE

EBENEZER MOTH

23" SPAN AS SHOWN FOR .5c.c. DIESELS
ENLARGE 133% FOR .75c.c. DIESELS.

CUT 4 CENTRE SECTIONS
FROM 2.5m.m. BALSAM SHEET,
2 FOR WING MOUNTS.
CUT ONE FROM 6m.m. SHEET
FOR TOP WING FUEL TANK
CARVE TO PROFILE & SAND.



Ebenzer flea

17.1/4" WINGSPAN SPORT FREE FLIGHT
FOR .01 - .02 ENGINES
DESIGNED BY J. M. FULLERTON

Especially designed for modellers who just itch to try something different
PROBABLY the most attractive of the famous Flying Flea series, the H.M. 290 design was first released by Henri Mignet in 1946. A number have since been built by amateurs in various parts of the world, and with some modifications, the design is still current as the H.M. 360.

The wings of our model are each made from two pieces of 1/8 in. sheet, with a hard leading edge and lighter rear section. They are sanded to a flat bottomed airfoil section, and the tips of the front wing only are given a dihedral angle, the joins being strengthened with several coats of cement.

Take care bending the wire struts to ensure that your wing sits square and at the correct angle of incidence, which is 1/4 in. positive to a straight edge laid across the undersurface of the rear wing. Do not fix the rear strut to the fuselage until flight testing is completed. Hold it temporarily with a pin so that the wing angle may be trimmed by sliding the strut up or down on the fuselage as required.

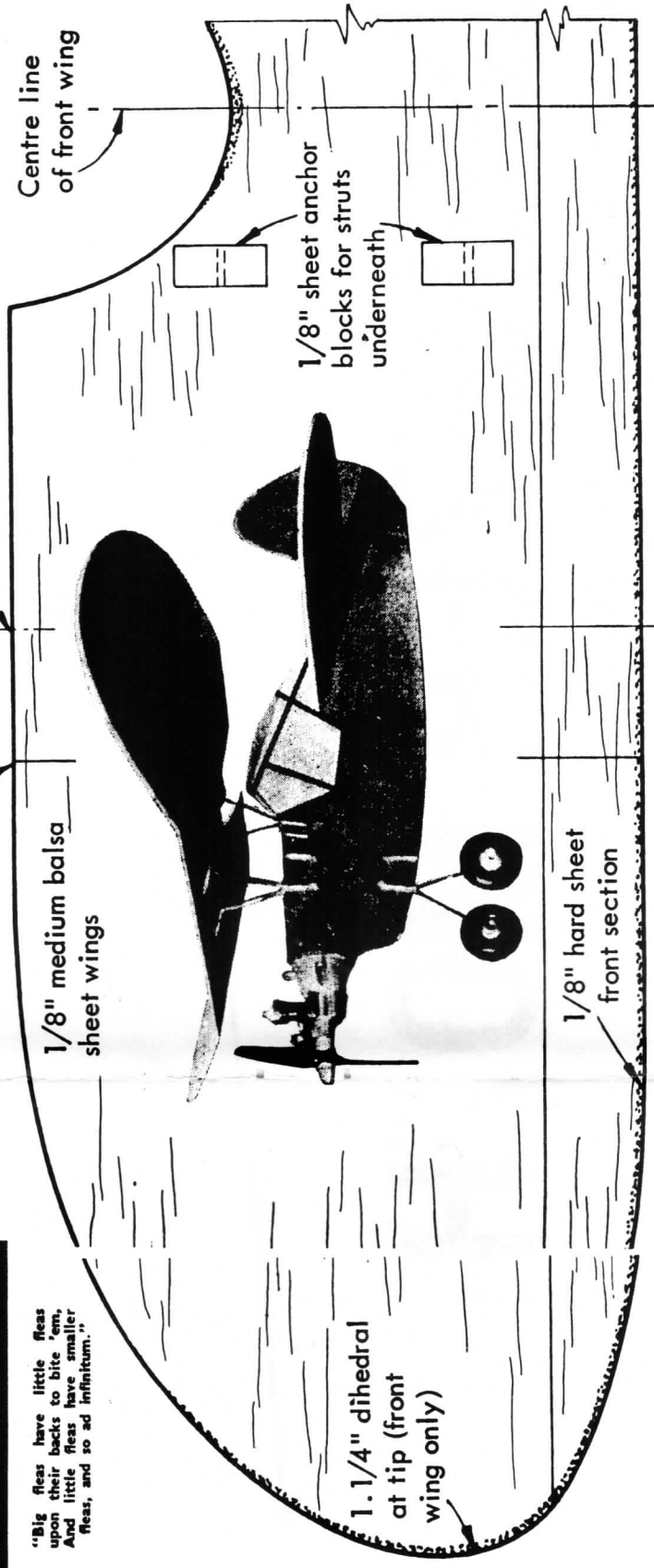
Fleas are notoriously sensitive to the C.G. position, so when your model is completely assembled and painted, check to ensure that you get it balancing at the point shown, using nose or tail ballast as required.

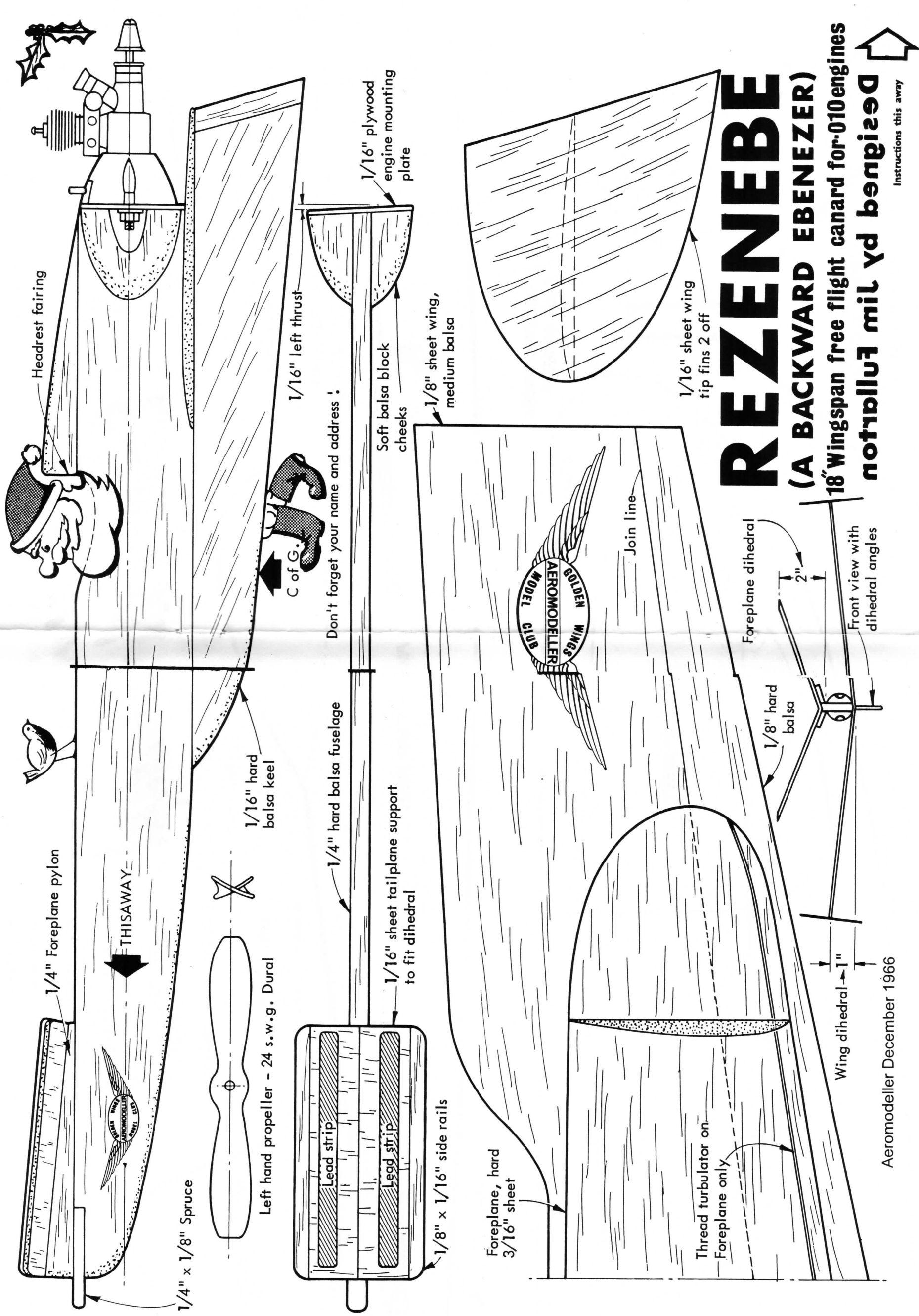
The original had a strong left turn tendency under power, which was overcome by using right thrust as shown, and about 1/8 in. right rudder, to give a left turn on the climb, and a right circle on the glide. The Cox .010 gives more than enough power for a model of this size, so for the first few flights at least, have the propeller reversed, with the convex face to the rear. To limit the motor run, the tank may be half filled by tilting the model on its side when fuelling up.

Due to its compact layout, the Flea is almost indestructible, and a little perseverance should have you turning in fine flights. On the other hand, if it still fails to "Come up to scratch" (shudder) you can always try flea powder!



"Big fleas have little fleas upon their backs to bite 'em, And little fleas have smaller fleas, and so ad infinitum."





REZENEBE

(A BACKWARD EBENEZER)

18" Wingspan free flight canard for 010 engines
 notyblu7 mil yd bengizeo

Instructions this way

Aeromodeller December 1966

freebee

By 'Gray' of the Small Model Association

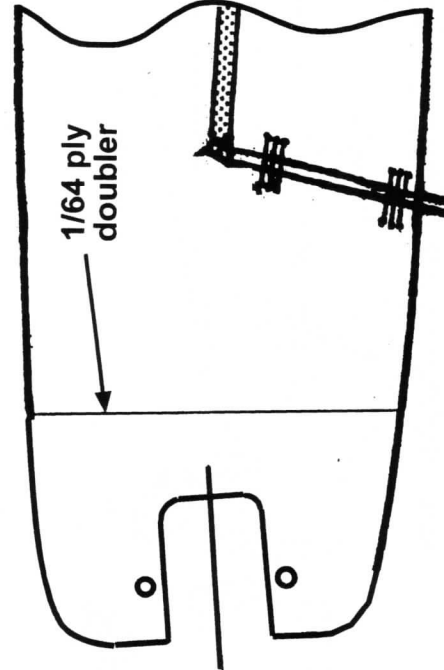
Electric Ebenezer the Champ!

AN 'EBENEZER' CLASS
FREEFLIGHT MODEL
FOR .010 TO .020 MOTORS,
BASED ON THE FAMOUS

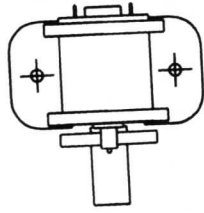


CONTROL LINE TRAINER

DESIGNED BY 'GRAY'
OF THE
SMALL MODEL ASSOCIATION

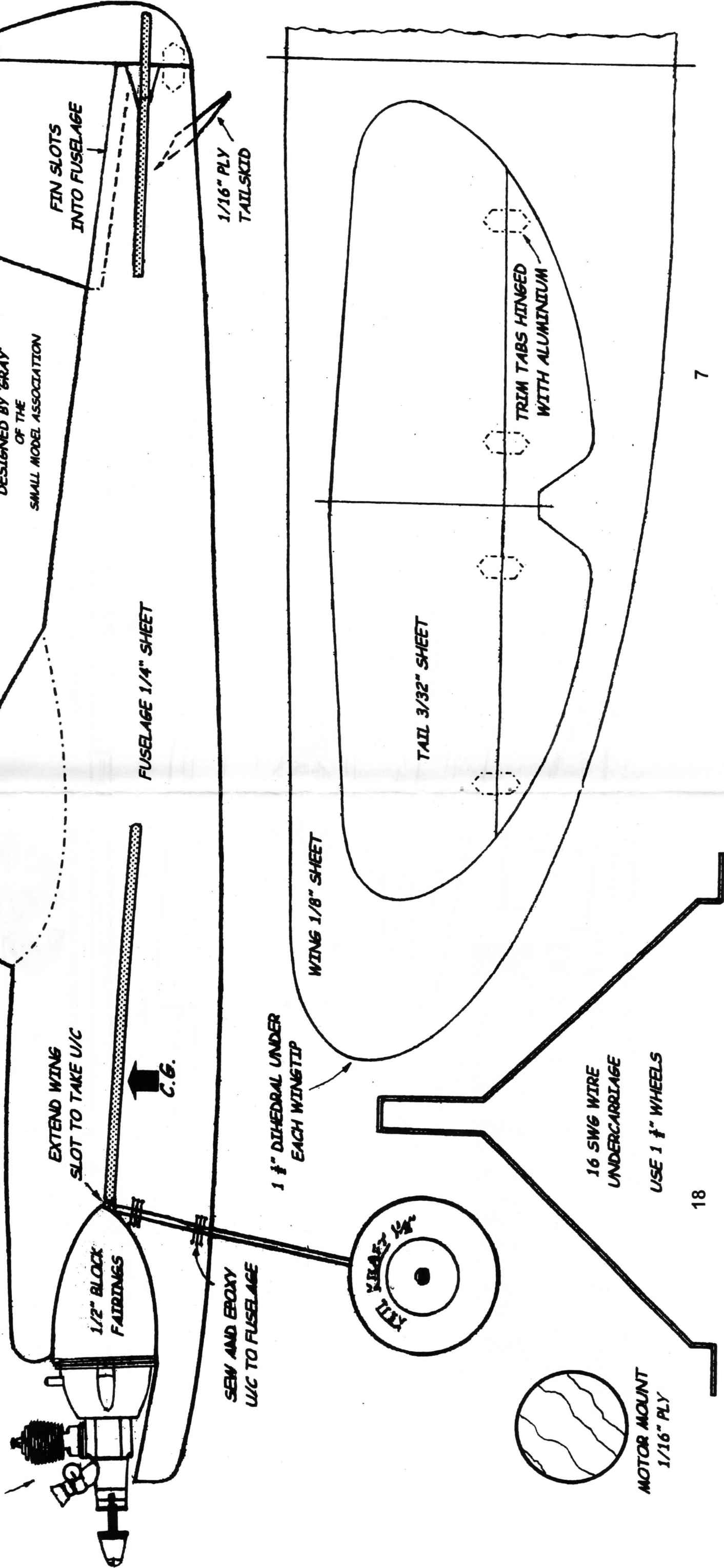


Attach Li-Poly batteries with double sided tape. Place to achieve balance.



Road Kill (N-20) motor

COX TEE DEE .010
USED ON PROTOTYPE



MOTOR MOUNT
1/16\" PLY

16 SWG WIRE
UNDERCARRIAGE

USE 1 1/2\" WHEELS