The Australian Thermaleer

Information, Competition Results and Articles for Australian SAM Chapters and Groups

Issue No.4 July-September, 2020

SAM 600

SAM 1788

SAM 270
WESTERN AUSTRALIA

S.A. OLD TIMER ASSOCIATION
SAM 1993

VINTAGENTS
SAM 84 Queensland

Oldtimer Flying before COVID-19
Photo from Karen Paton

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"The Thermaleer" is the official newsletter of SAM 600 of Australia, Victorian R/C Old Timers Association (SAM600) Inc.

STOP PRESS

From Brian Laughton.

I was speaking to Lyn Clifford and he asked me to let the SAM 600 members know that all the hard work they have put in at the Cohuna club has paid off.

As of the 1st October, The Cohuna Club, along with a couple of full size fliers and the local Lions Club, will be the administers of the complete Cohuna Airport, full size and models.

They hope to start flying again at the beginning of November if WE are out of lock down, and they have a permanent 2000ft height clearance which should get us back in the air. So let's all get together and start to have some fun again.

Brian Dowie. **As you are probably aware Brian Dowie is not very well and unable to carry out his duties as Secretary and Treasurer for the time being. Therefore I have taken over as a fill-in until he recovers, or if he doesn't want to continue in the job, we will need to elect a new Secretary / Treasurer at the next AGM.**

I will *NOT* be standing for this position so we would appreciate it if you could put your heads together and nominate a person for this job when the AGM is announced, perhaps someone other than a Melbourne person as we are running out of candidates and our comps have mainly regional flyers so it would be good to have a country person do the job. Please give it some thought.

SAM600 President's Report - Kevin Fryer.

September 2020.

A bit of good news from the Cohuna Club. The new lease for the Cohuna Field should be finalised shortly.

(*see Stop Press - Lease starts on 1st October - Editor*).

Lyn and his team have done a good job and this should lead to more support for the club improvements. The next step is to complete the extra height clearance application for our contests. If successful this will be the icing on our cake for us.

At present I am still in lock down, and can only travel 5 Klms from home, so I have taken up flying chuck gliders and discus-launch gliders in the local park. I have not caught a thermal yet! See the photo of my collection.

What else have I been doing during these times of this Covid19 pandemic?

Bob Angel, Editor of SAM 26 USA's "The Coastal Flyer", wonders why I took two hours to set up the points gap on the Brown Jnr. which I have installed in my refurbished Red Zephyr. I found there was .030" run-out in the points cam so I started with .008" at the start of the cam and it changed every time when locked up.

The outside edge of the Brown's propdrive washer was running true. I like to have a knurled prop drive washer to mount the prop, and of course we can also run a 2" spinner. So I machined the rear of a 2" spinner washer with a .004" interference fit with the engine prop drive washer, then heated it up and shrunk it on to the engine prop drive washer to facilitate the prop/spinner combination. See photos.

Also the Brown's shaft is very short, so I machined up a prop nut along the lines of a McCoy .60 prop nut to mount the prop and spinner assembly on the Brown.

The Red Zephyr with the Brown Jnr., which is running well now, is now ready for a test fly just as soon as the Covid rules will allow.

I have an Anderson Spitfire and a Super Cyclone both with broken points springs and I had some auto points in a box. After checking these points I found that some had a slot in the spring to clear the rocker, and the spring cut ok with Wiss Snips to make the slot longer. The modified point spring fitted to the Anderson without drilling another hole in the spring.

Not so lucky with the Cyclone points spring as the spring material was too hard to drill a hole in the correct place. Lucky I did heat treatment of metals 50 years ago. I heated up the end of the spring until it just started to turn Red and let it cool. Luckily I was able to drill a hole in the required place to fit it to the Cyclone, and it did not stuff the tension of the spring.

I have taken up Clint Eastwood's advice, "DONT LET THE OLD MAN IN".

Stay safe, KEVIN FRYER

(See more photos on next page)

Another "Fryer" Cumulus, at 92%, under construction for Gordon, to be powered with the Norm Campbell Dooling .61. Should be a great performing model for a newcomer to Oldtimer flying.

Sam 600 Contest Director's Report.

From Don Grant.

There has been nothing to report as far as competitions go because of the latest lockdown here in Victoria.

The VMAA have issued instructions that there be no flying at club sites. Which couldn't be done anyway because of the lockdown rules.

I have been able to fly because I have a strip on the farm. It is now in good condition as I levelled it off in the Autumn and re-sowed it. It had been badly pugged up during the previous winter. My son had put the cows in the paddock during a period of very wet weather. I had roughly levelled it as soon as I could when the weather improved but then it was invaded by cockchafer grubs in the spring and they did a pretty good job of ploughing it up. I sprayed the strip to get control of them and then set about re-sowing it. As it turned out the grubs had done me a favour as I was able to just spread the seed by hand and then roll it in with the ute. To protect it this past winter, which has also been wet, I put a solar powered electric fence around it to keep the cows off. The fence can be easily dropped and erected again if I want to fly.

During this period of no Comps I have built a ½A Bomber which I mentioned in my last report and at last got an electric 1/2A Playboy Junior with a 54" wingspan to fly properly. I had bought the model at a club auction several years ago and despite a lot of trying couldn't get it to fly well. I don't know what I did this time, might have been more lead in the nose, but it now flies well. I hope to be able to fly both models in our electric 1/2A class which is now our most popular class.

I mentioned in the last report that I had converted a Gas Champion to electric to use as a height indicator before comps. I had bought it from a deceased estate. When bought it was powered with a McCoy. I think the previous owner had also bought it from deceased estate or from a retired modeller. Whether I put the McCoy back in remains to be seen. It was covered with tissue and dope which had gone brittle and I got sick of patching it so I decided to recover it. What follows is my method of removing the old covering which I have used many times with similar models.

I wrap the part to have the covering removed in paper towels held in place with sticky tape then soak the towels in acetone and seal the part in a heavy weight garden garbage bag. Wait a few minutes until the covering becomes soft then gradually remove the bag, removing the covering as I go. The bag is there to slow the acetone evaporation rate and give it more time to soften the covering. It is important to gradually remove the bag because if the covering dries it has to be soaked again. If it goes well large sections of covering will peel off in one go. I keep a brush handy with more acetone to deal with the bits that are harder to remove. A pair of needle nose pliers and various scrapers also help.

As I removed the covering it became clear that the builder was very skilled as a

narrow strip of hardwood had been bent around the leading edges and formed to the aerofoil shape. The curves are such that I wonder if the strips were steamed to enable them to be bent. After removing the old covering once the part is dry it is necessary to check the glue joints as the acetone can weaken some glues. If in doubt I go over the joints with super glue. It is now recovered in transparent film.

Before I decided to recover it I worked out what weight battery I would need to get it to balance which turned out to be a 4000mah 4s. I forgot to weigh it before I started and I think it now weighs less as I now have use a smaller battery or put

some lead in the tail to get it to fly without a lot of up elevator. The motor in use at the moment is a Turnigy SK3 3548 700KV turning a 13x8 electric prop and drawing 58amps with a 70 amp ESC putting out 850 watts at full throttle. If used as a height demonstrator the intention is not to run the motor flat out especially as those performance figures are over the recommended ratings.

½ Fuel Allocation Trial

Texaco Test flights. Tuesday 5th March 2019. ½ fuel allocation.
Light, cool, S.W. Wind. Little lift.
Lanzo Bomber. Anderson Spitfire 60 12mm fuel

1. 11.30 am 286 metres (938ft.) no lift 8.89 minutes total flight time.

Started engine after lunch, well out of tune despite not altering anything.

2. 2.30 pm better engine tune 398 metres (1305 ft.) light lift 20 minutes flight time.
3. 3.00 pm. 410 metres (1345ft.) 2 minutes engine run no lift 9.5 minutes flight time.

I can sometimes get engine runs close to 5 minutes with a full fuel allocation if I am game to let the tank run out. By which time the plane is only a speck and orientation is difficult.
Regards, Don Grant.

From Brian Laughton

The photo you are looking at is the result of me criticising my wife Wendy's cooking, so be warned all of you brave fellas, just eat it and shut up or be prepared to be hit with a frying pan.

But seriously this is the result of me not lifting my feet high enough when I stepped onto our back decking. My foot caught on the edge which is 100 mm high and my feet stopped but my body didn't and down I went flat on my face.

When my wife found me I was face down in a pool of blood and couldn't get up. So, when you get old, make sure you know where your feet are before you move.

But out of the bad is sometimes good as I have been offered a job haunting houses. Hope I look better than this at our next comp.

A Buzzard Bombshell, being held by none other than its original designer, Joe Konefes. Joe also designed the Comet Curtiss Robin shown on the preceding page.

At the Scottish wedding reception the D.J. yelled...

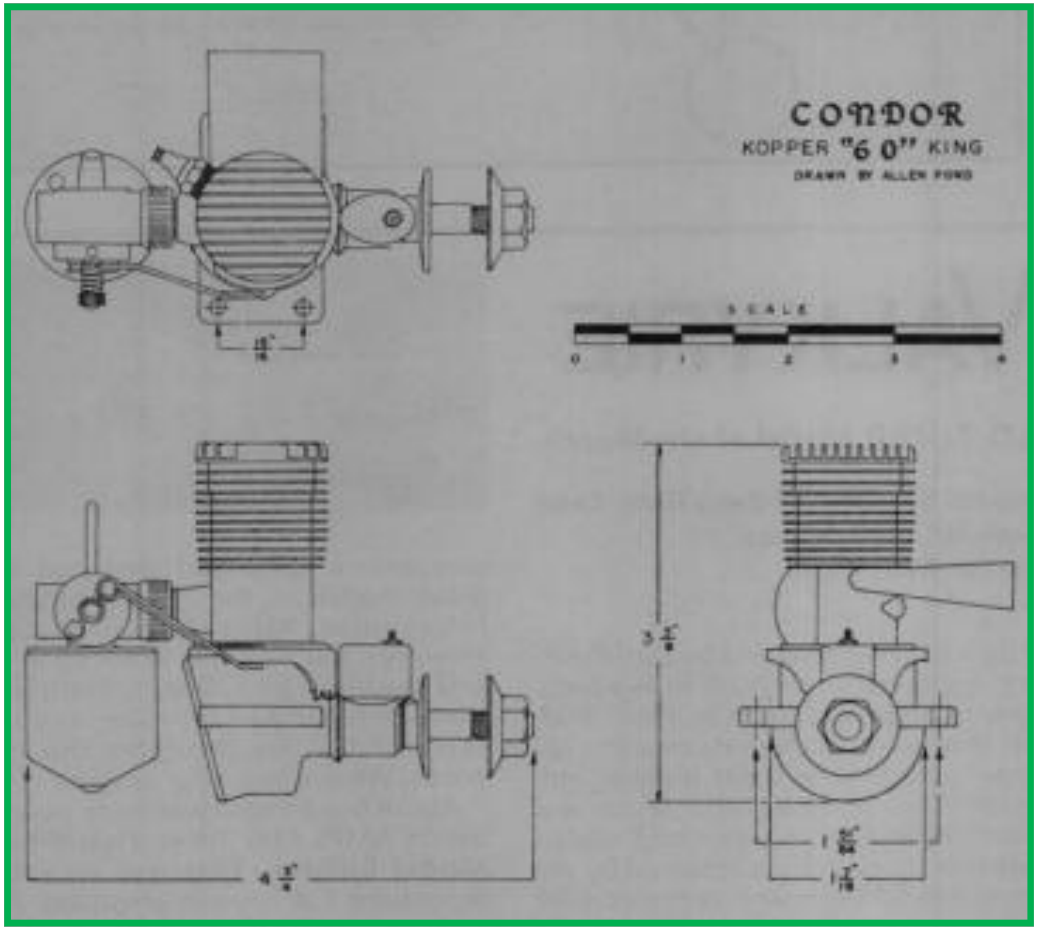
"Would all married men please stand next to the one person who has made your life worth living."

The bartender was almost crushed to death.

ENGINE OF THE MONTH.

From Model Builder Magazine June 1979 by John Pond.

This month's engine, the Kopper King 60, known also as the Condor 60, was a very compact .60 size engine. The most unusual feature of this engine was the combined control of gas, spark, and air with only one lever. One could choke the motor by closing the throttle arm and then opening the air intake, at the same time advancing the spark timing. Certainly did cut down on the amount of items to adjust to produce the best running condition.



According the Charlie Folk, who also wrote an article for the Engine Collectors Journal, the engine was actually designed by an English toolmaker, Roy Lloyd, in the late thirties. To start with, like most engines of that era, production was strictly a garage operation, being produced in Bob Gardner's basement in Pittsburgh, Pennsylvania. Of course, Lloyd and Gardner produced other engines such as the Condor Midget, but we are primarily concerned with the Kopper King 60.

As mentioned, the first engines were produced in the basement shop using only a South Bend lathe, a drill press, and several other pieces of small equipment. Surprisingly, Lloyd and Gardner employed two apprentice machinists. Each engine was hand-lapped and carefully fitted (they didn't have a honing machine) utilising a special lapping compound. Each engine was bench run, disassembled, cleaned, then reassembled and boxed for shipment.

About this time, the Pittsburgh Brass Manufacturing Co. became interested in obtaining the manufacturing rights for this engine. The deal as completed gave 50% to Pittsburgh Brass for all rights and privileges to the patent rights.

Before WW2 started, and during the time Lloyd and Gardner were associated with Lloyd and Gardner, most of their time was spent in perfecting the design for production purposes. Actually, only about 100 engines were produced before a lack of materials brought on by WW2 shut production down.

Around 1943, Gardner and Lloyd formed the Rob Roy Co. (ROBert Gardner and ROY Lloyd) to get in on the defence production work. So, when Pittsburgh Brass was approached in 1945 by Robert Edward Miller, of Miller Machine Products, Chicago, Illinois, to purchase all rights to the Condor 60 engine, he had to pay $2,000 to Pittsburgh and a like amounts to the Rob Roy Co. to obtain full rights.

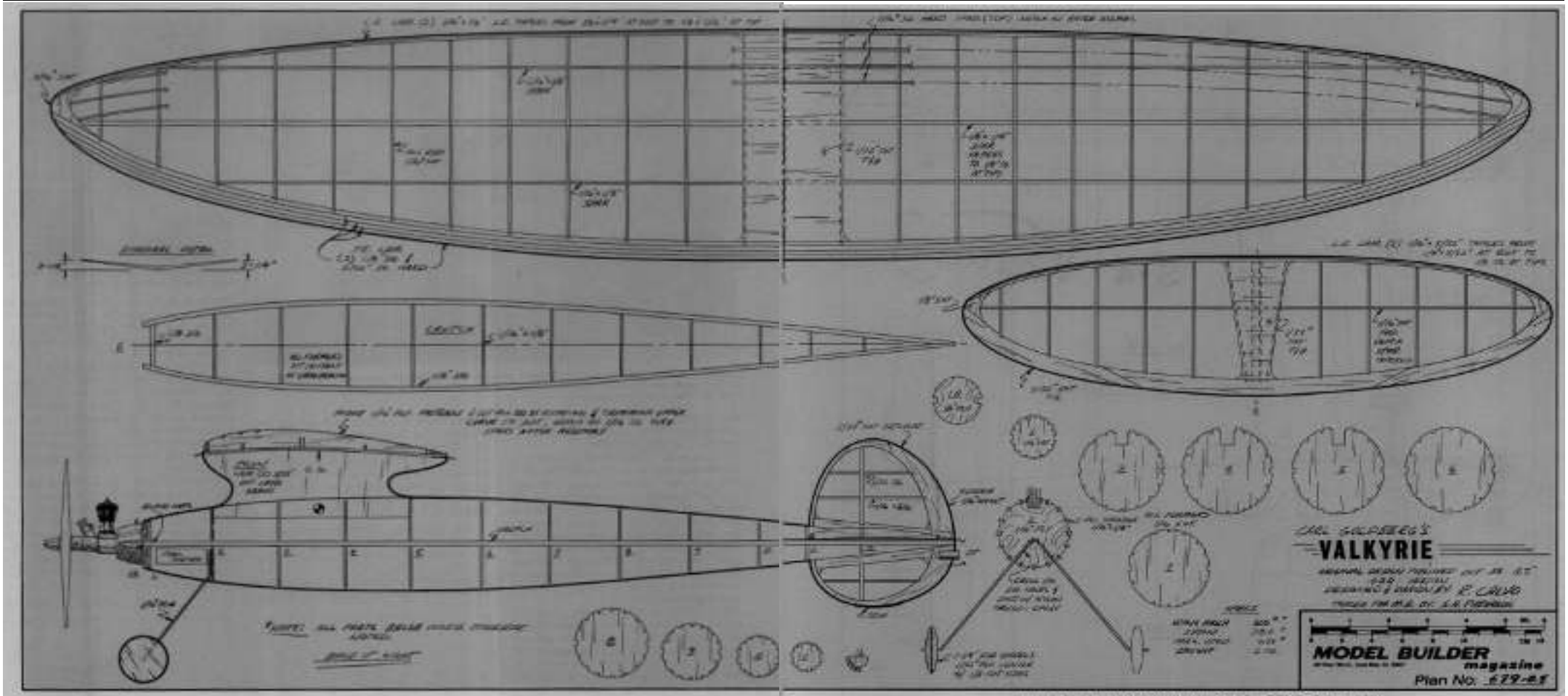
Miller then assembled engines in his plant and set up production of those parts needed (pistons, etc.). Condor Kipper King 60 engines were sold through a large hobby shop known as Aerocrafters in 1946. The actual amount of production is unknown, as the serialization of the engines does not appear to be uniform.

As noted before, the Kopper King was one of the smallest .60 engines produced; however, it did turn 13x6 and 14x6 propellers quite creditably. The unusually good finish on the piston and cylinder wall was in no small part responsible for this performance. For those who get slightly confused on the pre-WW2 and post-war models, there was little difference except the shaft size was reduced from 9/32 to 1/4 inch (to take advantage of standardized parts), and the connecting rod was changed from bronze to steel.

For the technically minded, the Condor Kipper King 60 featured a bore of .960 and a stroke of .60 cu. in. The weight was advertised at 7-3/4 ounces (pretty light for a .60). A standard Champion V-2 plug was mounted horizontally at about ten o'clock looking down from the top with the prop shaft on the right.

The Condor .60 featured a neat way of inverting the engine. All that was necessary was to loosen the split nut on the carburetor, detach the spring wire connecting link, reverse position of the carburetor, tighten the split nut, and reattach the spring wire on the lower brass boss of the carburetor throttle body and to the opposite side of the timer segment ring. This method quite reminiscent of the system used by the Hetherington Meteor. Recommended fuel mixture was four parts of high test or ethyl gasoline (not regular or low-lead!) to one part of S.A.E. 70 oil.

In conclusion, the Condor .60 was just another good engine that failed to survive, simply because the market was already flooded with good and proven .60 size engines having good capital backing.



FULL SIZE PLANS AVAILABLE – SEE PAGE 116

VALKYRIE

OLD TIMER Model of the Month

Designed by: Carl Goldberg/Rudy Calvo
Drawn by: Al Patterson
Text by: Rudy Calvo

• The Valkyrie, designed by Carl Goldberg, appeared in *Air Trails* in two parts, issues September and October, 1938. The theme: A high-performance gas model combining light weight and streamlining. No doubt the design was influenced by Carl's background related to indoor models. Carl, retained by the Comet Model Company, continued the

competitive spirit and designed such great models as the Zipper, Sailplane, Interceptor, Mercury, and Clipper. However, the Valkyrie, reduced in size and modified for rubber, produced by the Scientific Model Company, has remained in my thoughts since my youth. What a beautiful design!

About 8 years ago I was made aware of the SCAMPS Old Timer club through **Model Builder**. This was an article describing Cal Aero information. Anyhow, Bob Oslan was kind enough to inform me of the Old Timer movement.

Jimmy Dean had the *Air Trails* issues, and that's how it all started. I have built the Valkyrie in an .020 replica version, the subject of this article, a half-size version (60-inch span) with an Arden .199, and a half-size version, R/C, O.S. .40 (shown in **Model Builder**, April 1979 issue, at the Pasadena IMS Show). If a little extra work doesn't offend you, here's a plane you can have a lot of fun with. My plane weighed in at 6 ozs. It's a little large for .020 application, but I felt the clean aerodynamics design, minimum parasite drag, and high-lift wing would overcome the higher performance of other designs, or at least be somewhat competitive. But enough of the historical background. Let's get on with the construction.

FUSELAGE

The fuselage is built on a 1/8 sq. crutch with 1/8 x 1/16 spacers behind each bulkhead. This method speeds construction and is similar to the concept of Gene Wallock and others. The bulkheads are solid 1/16 sheet. You may elect to hollow the formers for weight consideration. The bulkheads are 1/16 of an inch less than the finished skin, with 1/16-inch notches to receive hard 1/16 x 1/8 longerons. The landing gear bulkhead is 1/16 plywood and the complete assembly is set in place on the crutch.

The firewall is 1/8 plywood with blind nuts and is set in place complete on the crutch. The pylon is laminated sheet as noted on the plan. Wing platform is 1/16 sheet. The fuel shutoff timer is set on the right side next to the firewall, just below the 1/8 sq. crutch.

WING

The wing ribs are made from a 1/16 plywood template, full size, as noted in the profile view. The method is to rotate the template to the chord length at each station. The rest should be like typical wing construction.

TAIL SURFACES

The horizontal stabilizer uses a full-depth spar to minimize warpage. The rest is of conventional construction.

FINISHING THE MODEL

The fuselage is lightweight silk, applied wet. The wing and tail surfaces are Japanese tissue. Pre-dope the surfaces and apply the covering with acetone. I used 3 coats of 50-50 nitrate dope. The final 2 light coats are 253-00 gloss Fullerplast (sprayed). This is an industrial coating manufactured by Fuller O'Brien. It requires 283-00 Fullerplast catalyst and then 50-50 mixing with Fuller 581-00 thinner (last) for spraying application.

FLYING THE MODEL

The model flew right off the board! Mine required a little right thrust and up thrust with a sandpaper shim. Right rudder was also required. Your model may not require these adjustments. Tilt in the stab may be required for a right glide pattern. My plane flies right-right. The power pattern, considering the size, is a reasonably fast, tight right spiral, then watch the glide! This has been a most enjoyable experience . . . and still is! And that's what it's all about. •

DURATION TIMES

Duration Times is the official Bulletin of SAM 1788
SOCIETY OF ANTIQUE MODELLERS OF AUSTRALIA INCORPORATED

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SAM1788 President's Report.
September 2020

Sadly no flying since the last issue of TAT in June. We had boldly tried to run our Coota Cup competition in Cootamundra in early September but our local precious princess put an end to that. The order that was published by NSW Sport and Recreation on 16 August was for six weeks and should end on or about 27 September unless further extended. Given the good Covid19 numbers recently, I believe that it would be unlikely the order to be further extended.

This means that our next event, the postponed 38th Championships, scheduled for October 7 to 12 at West Wyalong, should go ahead. At this time the numbers aren't great but it should still make for a good week of flying. The field is green and it will make for a pleasant week – if the gods favour us with calm conditions. Remember that the AGM will be on Friday, a swap meet on Saturday and a DIY BBQ with Presentations on Sunday evening. Details elsewhere in this newsletter.

Remember the Golden West Old Timer Competition on 14 and 15 November.

The AGM for this year will be on Friday evening at the Adrian Bryant Field. There have been no nominations for any of the executive or committee positions so here is your chance to get nominated and to get involved and contribute.

A Covid19 Safety Plan has been distributed to members and is also published elsewhere this newsletter. Please read it and understand the content and the reasons for the rules in the plan. Observing the rules will ultimately be for your own good and that of your fellow modellers.

The competition calendar for next year has not been finalised but should be along the following lines: Orange in February, 39th Championships at Easter, Tamworth maybe in June, Cootamundra in September and Parkes in November. The Nationals may also fit in there somewhere.

Some members have not re-joined as yet but we look forward to seeing them again in the near future.

Keep Safe and keep your distance.

Peter van de Waterbeemd

38th SAM 1788 Oldtimer Championships
Wednesday 7th to Monday 12th October 2020
at the
Adrian Bryant Field, West Wyalong

- A complete program of R/C Old Timer events will be flown as per Section 5 of the 2017 MAAA rules. As there is a 2000' ceiling on this field, fuel allocation and engine run times may be limited for some events. This will be determined at the pilot's briefing prior to the event.
- Additional events include Vintage Free Fright, Cabin Scramble and Phantom and KK Champ Control Line racing.
- Registration will be on Wednesday, note this, Wednesday. Models will be scrutineered at Registration so bring your model plans. A flying fee of $25 per flyer for the week has been levied by NSWFF and this is to be paid via the entry form.
- Competitors must be a SAM Chapter members.
- Current MAAA membership cards must be shown by all flyers.
- AGM is at 8pm on Friday 9th October at the West Wyalong Field.
- There will be a Swap Meet at 6:30 pm on Saturday 10th at the Camp Kitchen. Bring all your pre-loved gear and your wallet! Most swaps involve swapping money for goods.
- THERE WILL NOT BE A CATERED PRESENTATION BBQ.
  Instead, attendees will need to bring all of their own food.
  BBQs will be provided for this event. (There is no charge for this event).
- On field camping including hot showers and power is available. $10 per van or per camp per night.
- A note to those persons who registered for the competition in April. A new registration is required to be completed and forwarded to Dave Brown for this postponed competition. Cheques previously sent have not yet been presented. Fee adjustments will be made at registration.
- A requirement for control line racing. The events will be flown over the new bitumen hard surface. This surface can be badly degraded by diesel fuel, so it is mandatory that all filling of tanks and the starting of diesel engines be over a cardboard sheet. This sheet must be thick enough to absorb all fuel and spills and large enough to capture all spray and exhaust.
- The format of this 38th Championship Competition is basically the same as our previous Championships other than Registration is on Wednesday and all events and activities will be at West Wyalong. Daylight hours will be longer than they would have been at Easter so there is plenty of time to complete all flying.

Invitation by the Society of Antique Modellers of Australia
SAM CHAPTER 1788
to the
38th SAM 1788 Old Timer Championships
At the Adrian Bryant Field, West Wyalong

Program of Events - 2020

Wednesday 7 October

	Sign in, Processing, Test, Sport Flying, RC Trimming	..... West Wyalong

Thursday 8 October

8 am to 11 am	Free Fright Vintage (See Peter Scott)	..... West Wyalong
8 am to 12 noon	Control Line Phantom and Champ Racing	..... West Wyalong
2 pm to 5 pm	R/C Old Timer Glider	..... West Wyalong

Friday 9 October

9 am to 9:30 am	R/C Cabin/Sports Model (designed before 1960) Scramble	West Wyalong
10 am to 1 pm	1/2A Texaco	..... West Wyalong
2 pm to 5 pm	Nostalgia	..... West Wyalong
8 pm sharp	SAM 1788 Annual General Meeting (Lucky door Prize) Either in the House or in the Camp Kitchen	..... West Wyalong

Saturday 10 October

9 am to 1 pm	Gordon Burford Event	..... West Wyalong
2 pm to 5 pm	R/C '38 Antique	..... West Wyalong
6.30 pm	Buy, Sell & Swap Meet at Camp Kitchen	..... West Wyalong

Sunday 11 October

9 am to 1 pm	O. T. Texaco	..... West Wyalong
2 pm to 5 pm	Duration	..... West Wyalong
6.30 pm	Presentation, BBQ at rear of House, Toast to absent friends and Raffle	..... West Wyalong

Monday 12 October

9 am to 12 noon	2cc Old Timer Duration	..... West Wyalong
1 pm to 4 pm	Standard Duration	..... West Wyalong

NOTE:
As per arrangements at Canowindra, there will be no on field catering at lunch during the competition. Flyers and assistants will need to provide their own lunches on all days.

There will be a Presentation Roast BBQ on Sunday evening at the rear of the Farm House. This is a BYO drinks BBQ but remember there may be a drive back to West Wyalong for some. There is a $20 charge per person for this meal.

A flying fee of $25 per flyer has been levied by NSW FF for the use of the field for the week. As this is a new venue, this is a new charge.

Every competitor is asked to re Register for this competition. Registrations for the April event will be discarded. A reduced Registration Fee of $15 includes a donation of $5 to West Wyalong Hospital. For those flyers who have already paid for the postponed April event, we will make adjustments on an individual basis during registration. Note that cheques for the April Championships have not been presented.
There is on field camping available with power and hot water, $10 per van per night.

****Important:** *For the Presentation BBQ, if you have any special dietary requirements could you please let Peter Scott know well in advance so he can negotiate with the caterer.*

38th SAM 1788 Old Timer Championships
Adrian Bryant Field, West Wyalong
7th October to 12th October, 2020

Competitor Details and Entry Form

Name: ..... SAM No: ..... MAAA No: .....

Address: ..... Postcode: .....

Phone No: ..... (home) ..... (work) ..... (mobile)

Email Address: .....

FUN EVENTS
(Please tick events - No entry fees)

_____ Vintage Free Fright
_____ C/L Phantom/Champ Racing
_____ R/C Cabin Scramble

Frequency: .....

R/C OLD TIMER EVENT Frequency
(Please tick Events and supply Frequency)

_____ R/C Old Timer Glider .....
_____ 1/2 A Texaco .....
_____ Nostalgia .....
_____ Gordon Burford Event .....
_____ O. T. Texaco .....
_____ R/C '38 Antique .....
_____ Duration .....
_____ Standard Duration .....
_____ 2cc Old Timer Duration .....

Models will be Scrutineered at Registration. Please bring your models and their related plans.

COMPETITOR'S OFFICIAL STATEMENT OF AGREEMENT:

I agree to abide by the R/C Old Timer Rules as set out in the MAAA Inc. Official Rules, 2017, and any local rules or requirements laid down by SAM 1788. I agree to compete in a sportsman-like manner and to accept the Contest Director's decision in any matter arising out of the conduct of this Championship including directions regarding height limits. I am a fully paid up member of an MAAA Inc. club and also a financial member of a SAM Chapter. If you are not a member of a SAM Chapter you can join SAM1788 for $20 at Registration

YOUR CURRENT MAAA MEMBERSHIP CARD MUST BE PRODUCED AT REGISTRATION.

SIGNED: ..... **SAM CHAPTER:** .....

ENTRY FEES and BBQ TICKETS

**** Presentation BBQ Tickets must be pre-paid for catering purposes**

Registration Fee $15 plus $25 NSWFF $ 40.00

Presentation BBQ Tickets*
..... @ $20 each ..... $

Event Entry Fees:
(Maximum Event Fees $50 - Juniors are Free)
No. of Events ..... @ $10..... $

TOTAL FEES ..... $

Please make cheques payable to SAM1788 or Direct Deposit to BSB: 032 527 Account: 144170 Use your MAAA number as the deposit reference.

CLOSING DATE FOR ENTRIES Friday 2 October, 2020

Send Entries with payments to: Dave Brown
Entries Coordinator
31 Lane Street
WALLERAWANG NSW 2845

Direct all Enquiries to Dave Brown - Telephone Home: 02 6355-7298 Mobile: 0402 868 568

Control Line Racing at SAM1788 Championships

Control line Racing at the upcoming Championships will be run on Thursday morning from 9am to 12 noon in its own exclusive time slot.

The classes and engine rules which apply at the Championships are detailed below:

Keil Kraft Phantom - Two Classes:
Class 1– Side port Diesels up to 2cc as per the current Class 1 rules.

Class 2– Any production plain bearing Australian or British diesel, up to 1.5cc.

Any plain bearing Taipan/Burford engine up to 1.5cc produced before 31/12/1970.

British Engines: Frog 1.5/1.49cc; Elfin 1.49cc; AM15; ED Hornet, Allbon Javelin; DC Sabre; ME Snipe or any other British engine produced before 1970 and approved by the SAM 1788 committee.

The old Phantom Class 3 and Class 4 were phased out for 2019.
Note that it is a requirement for Phantom models that the engine is securely tethered to the control system with steel wire.

Keil Kraft Champ - Two Classes:
Class 1– Any Australian or British engine, or replica thereof, up to 0.8cc produced before 31/12/1970. The MP Jet .6cc is included for historical reasons.

Class 2– Any Australian or British engine, or replica thereof, up to 1.0cc produced before 31/12/1970.

The event rules for all classes are quite simple:

- The control lines are to be not less than 35' in length measured from the front of the handle grip to the centre of the model.
- The model is timed over 12 laps from a standing start.
- Each model has three timed flights with the lowest time to count.
- A competitor may enter more than one model in an event, but a model may not be entered by two or more competitors.
- An entrant may elect to have the model flown by another person.
- The engines in Phantom models are to be securely wired to the control system with steel wire.

Requirements for control line racing at the Adrian Bryant Field:
The events will be flown over the new bitumen hard surface. This surface can be badly degraded by diesel fuel, so it is mandatory that all filling of tanks and starting of diesel engines be over a large cardboard sheet. This sheet must be thick enough to absorb all fuel and spills and large enough to capture all spray and exhaust.

SAM1788 Competition Calendar for 2020

October 7-12 — **SAM 1788 38th Championships - West Wyalong**
Events:
All 9 MAAA Old Timer Events
plus Cabin Scramble and Control Line.
Contact Person: Peter van de Waterbeemd 0412 632 470
See Official Program herein for details

November 14–15 — **Golden West Old Timer Weekend - Parkes**
Events:
Saturday: 2cc Duration, Gordon Burford, Duration
Sunday: Cabin Scramble, 1/2A Texaco, Texaco
Contact Person: Paul Farthing 0427 640 264

Golden West Old Timer Competition - Parkes

Parkes Miniature Aero Club Inc. — Nelungaloo Field.

14th-15th November, 2020

Saturday: 9:15 Start: 2cc Duration, Gordon Burford, Duration

Sunday: 9:15 Start: Cabin Scramble, ½A Texaco, Texaco.

All event to be flown to MAAA 2017 rules.
Note: Modelers must produce a current MAAA membership card.

Get together in Parkes on Saturday Night

** On field catering all day and camping on field
($10 per adult per night)

(Campers please note - power, toilets, hot showers available in the amenities block)

For further information phone Paul Farthing
0427 640 264

SAM1788 Covid19 Safety Plan

Reason for this Covid19 Safety Plan.

This plan has been developed in order to minimise the risk of flyers, their assistants and visitors, becoming infected with Covid19. The actions outlined in this plan are to be followed by all persons at all SAM1788 competitions, both on the flying field in the pits and flying line, as well as at associated meetings, meals and social occasions.

As a group of modellers we are all at high risk due to our age profile and therefore following this plan is extremely important in both limiting the possible spread of the virus as well as reducing (eliminating?) the risk of becoming infected.

In our situation the five major methods of stopping transmission are:

1. Please stay away from competitions if you or your assistants have symptoms or have been in a hotspot in the last fourteen days;
2. Observe social distancing of 1.5 metres at all times;
3. Wear a mask;
4. Use a hand sanitiser liberally; and
5. Clean your model and equipment if it has been handled by another person.

All persons attending a SAM1788 competition are to read this Covid19 Safety Plan and become familiar with its contents.

Major elements of the plan are:

1. Don't come if symptomatic.

Please don't come to a competition if you or your partner/assistant have any symptoms or have been in a Covid19 hotspot in the last fourteen days. Please leave if you develop symptoms. Sorry to be blunt. It is also advisable not to invite visitors to a competition thereby minimising further transmission risk.

This is important as we all come from different regions of the state and each region may have a different risk profile.

2. Practise social distancing. At a competition there are a number of scenarios, in the pits, on the flight line and in social situations. In each case, please keep your distance. In the pits individual stations will need to be at least 2 metres apart.

Generally not a problem in most events with larger models but can become problematic if a second pit line develops behind the first line and this first line is crossed by persons operating from the rear line. This situation ought be avoided by extending the flight line where possible. Chairs (when not used by members of the same household) should be 1.5 metres apart.

On the flight line the timer (if not from the same household) should be 1.5 metres from the flyer. This may be achieved if the timer remains behind the flyer. The assistant launching the model also needs to negotiate their way back into the pits by avoiding other persons.

Socialising. Modellers love to talk (some more than others) and social distancing of 1.5 metres needs to be observed in all these situations. This includes meals, discussions and meetings.

3. Wear a mask. When social distancing is difficult to achieve or cannot be observed, wear a mask. This especially applies in the pits and on the flight line.

There is no social stigma associated with wearing a mask. Please observe all protocols associated with wearing a mask and please do not leave it lying around. Keep it on your person at all times.

4. Use hand sanitiser. The virus can live on many surfaces therefore clean your hands frequently using either soap and water or a hand sanitiser.

5. Cleaning up. Avoid touching another person's equipment and models. This includes their cleaning cloths. If you handle another flyer's equipment or model, immediately use a hand sanitiser. This especially applies to use of another person's stopwatch which could have previously been handled by multiple persons. Conversely if someone handles your model or equipment, it must be sanitised by using a soap or cleaning solution. Every flyer must supply hand sanitiser which must be kept in their pit area for use by all persons on the flyer's team and by any other person assisting the flyer.

Remember to bring these three items (in addition to models etc.):

Hand sanitiser;
Masks; and
Cleaners for models and equipment (detergent, metho etc.).

Keep Covid19 safe!

SAM1788 Committee

A Bigger Bomber continued...

From Peter van de Waterbeemd.

The second major building task was the wing – all sixteen feet of it. It was built with a single 8 foot centre section and two four feet angled tip panels. The ribs were scaled up 200 per cent by Vince Hagarty, he then adjusted spar notch dimensions and the placing of two additional spars some 50mm towards the rear from the existing main spars. There are nine circular holes in each rib in order to save weight. A test weigh-in of all central panel components was disappointing so the ribs were moved further apart (eliminating five ribs) and two of the four spruce spars were replaced with balsa spars. Still too heavy but not much more could be removed.

My workbench was not long enough so temporary boards were screwed to the top allowing the centre panel to be built as one section. The spars were all placed together and rib locations marked. For the build wooden strips defined the trailing edge and one end rib. The ribs were installed on the spars at the marked locations and eventually all was glued together. The beauty of CNC routed ribs is that the spar notches are all exactly the same size and when I ripped all the spars, the firm fit of the spars into the ribs meant that the wing panel could be just about fully assembled without glue. Simples. No plan was ever drawn up. The notches in the trailing edge were made by a dado type saw made from four metal handsaw blades held together by screws at each end.

The tip ribs were routed out by Vince but just did not mate to the centre panel and could not be used. Vince decided to come to Eden with Janelle for the weekend, over 500km from Orange, and sort out the problem. They duly turned up and were accommodated, wined and dined and Vince set to and new tip panel ribs were produced. Watching the CNC router at work is fascinating, mesmerising, especially in the order it chooses to cut.

The tip panels were drawn directly onto the temporary boards on the workbench and built there. A lot of time was then spent in the installation of the removable 6mm x 20mm aluminium dihedral brace at each tip panel. Part of the problem is not knowing the stress to which the brace will subjected. This will depend on the final all up weight of the model, the flying speed and transient forces such as wind gusts and loops and rolls and p**s poor landings. Anyway, we will find out during the initial flights.

In order to fit the wing saddle, the model was assembled and set up with the tailplane spirit levelled and the wing saddle and wing added and rubber banded to the pylon. Again the wing was spirit levelled and it was also visually lined up to be parallel to the tailplane. Perfect. Saddle was glued in place and allowed to dry, Two days later it is about one degree out of alignment! EEK!! Not sure whether to remove the saddle and start again or just shim up the top of one side of the saddle.

There has been some progress on the covering. The fuselage has been covered in Sig Koverall, two pieces, one on the bottom two sides and the second on the top two sides. Full strength Mod Podge was painted onto the frame at the edges and when dry, Koverall was laid on and a small covering iron used to attach the Koverall.

Where the Koverall overlapped, Mod Podge was painted over the bottom layer and again when dry, the covering iron used to melt the Mod Podge and glue down the second layer. Koverall heat shrinks very well and the covered end result looks good.

I've been procrastinating on the tailplane as I now feel that the silk is too light. I am likely to remove the silk and replace it with Koverall. Same for the fin and rudder.

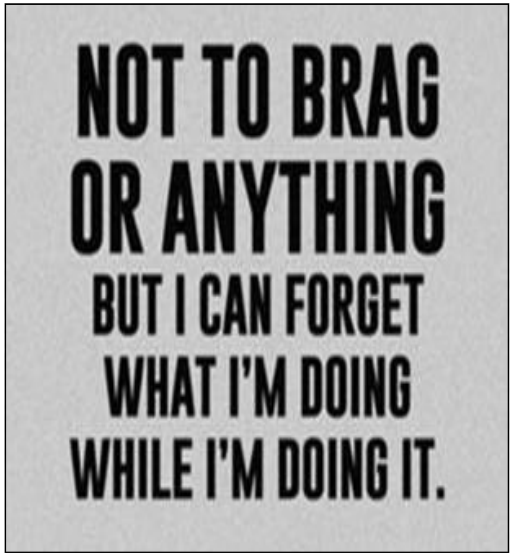
The model is probably 80% complete with obviously another 80% to complete. Maybe by Christmas.

The current weight as in the photos is 11.3 Kg and with a final weight in the likely region of 12.5 to 13Kg. This is to be borne by a wing of approximately 15 square feet. The wing loading is therefor likely to be around 13.5 oz/sq.ft.

The model will weight about five times that of my 100% Texaco Bomber and has four times the wing area so the wing loading increased by 25%.

The photo of the assembled model shows the overall size. The wing tip is chest high. However, the undercarriage looks wrong because the legs should be about 30" and are about 15". It was made from one piece of 36" piano wire. I'll have to replace it with two pieces of piano wire and that will improve the look.

The last Qantas 747 leaving Australia for the boneyard in USA.



WHY NOT A ZOOT SUIT? From Peter Scott.

The usual reason people don't build a Zoot Suit is that they are always looking for the ultimate model, which means that they have a competitive streak. But put a competitive and good flier in control of a well-built Zoot Suit with a good motor and chances are it will win the contest.

George Fuller designed this model in between the Stomper and the Dixielander. The Zoot Suit has advantages over both those models, especially for radio.

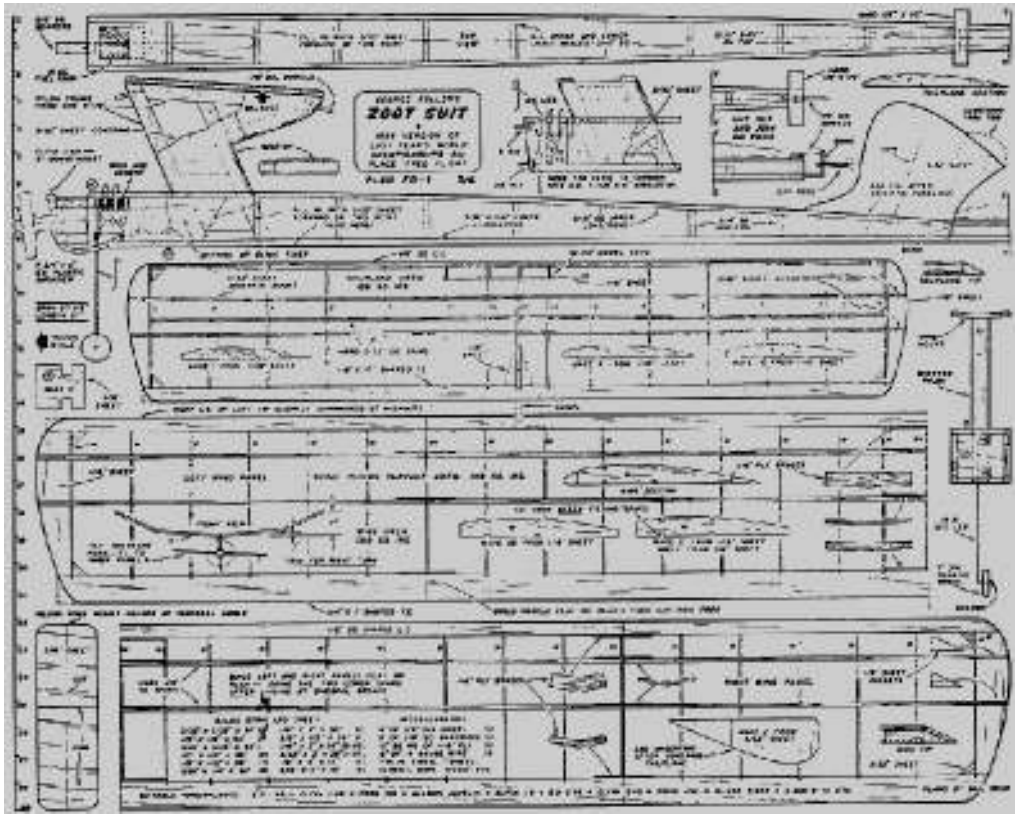
The Zoot Suit can be used for 2cc (1.8 Tyro) or any plain bearing Burford 2.5cc. It climbs as if on rails and at the end of a 40 second run is hard to see, so its stable climb is very useful at the end of the run. The fuselage has plenty of space for radio receiver, batteries and servos, always a bit of a problem for Stomper or Dixielander.

This model could also, with an engine change, make a reasonable nostalgia model, with say an OS 25 – or Enya 19 etc. So, one model to fly three events.

Construction is so straightforward and with a bit of enthusiasm could be ready to cover in a weekend.

I also have a Zoot Suit for Vintage FF power – amongst others, and it's probably the most predictable on climb and glide, with the Sabre 2.5 on 13secs, three minutes in neutral air is not a problem. It is also good in rough weather.

If interested in vintage FF I use radio shut-off and D.T. The days of watching a FF model fly in under power, or stall all the way down, or simply fly downwind in a straight line are over.



Zoot Suit PDF Plan from Outerzone: https://outerzone.co.uk/plan_details.asp?ID=1596

The Ramblings of an Ancient Aeromodeller.

From Basil Healy.

The Saga of the Goldberg Sailplane.

Shortly after I got my workshop set up after moving to Coffs Harbour, I was visiting another modeller when I spotted a rather sad looking Goldberg Sailplane residing in a corner of his garage .

The fuselage was broken just behind the pylon and the iron-on covering was brittle and split in several places. When questioned about the model its owner informed me that it flew like a dog, was slow to turn right but any attempt to turn left resulted in a vicious spiral dive requiring considerable height to recover.

Through holes in the covering I could see that both the wing and tailplane structures appeared to be in good condition, although there was quite a big warp in the wing, (spiral dive tendency explained!!).

I then informed the owner that it was repairable and that I could do it for him. He accepted my offer so I took the wreck home with me.

Back in the workshop I stripped off all of the covering and temporarily glued some of the fuselage stringers back together to check the alignment of everything. While doing this something kept niggling me that it did not look quite like the one that I had built in the 1980's. Also, why did it need 8 ounces of lead glued to the front of the wing mount? Reference to some of my old photographs revealed that the pylon had been installed about 1.5 inches further forward than mine. At this point I decided to build a new fuselage.

A few weeks later with the fuselage almost complete, I checked to see whether the tailplane fitted the platform I was about glue to the fuselage only to discover that the tailplane had almost no under-camber! Fortunately, this could remedied by cutting off the small section between the two elevators and re-setting it at the correct angle. The remainder of the rebuild went ahead without any problems.

Test flying was uneventful only requiring 3/32 inch packing under the leading edge of the wing. The big surprise was that the model required no trim change from climb to glide and there was no offset on either rudder or elevators. A "hands off" climb at about 45 degrees was normal followed by a slow flat glide made it one of the most pleasant models that I have ever flown.

The model was not flown again until it changed hands just recently and I was called on to install a larger fuel tank so that it could be used as a trainer. This task it achieves admirably, motoring around the sky on a slightly high idle, much to its owner's delight. He has discovered that thermals are much harder to stay in than experienced flyers make it look, but has to have been "talked down" after cutting the engine when caught in the odd strong one.

Another member of the club, who had flown it before it was damaged, took it up for a flight and could not believe how easy it was to fly now. He was reluctant to hand the transmitter back to its owner.

HEIGHT INDICATOR

From Peter Scott

I have the first of Harry Sokol's SAAM height indicator units and have just flown it in my electric sailplane.

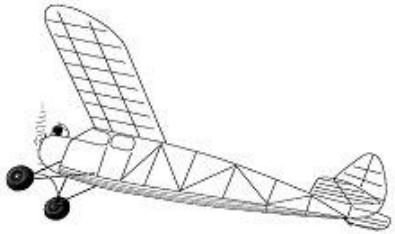
It certainly can tell you when you have reached the set height.

This is a prototype and my problem is I'm not into digital anything including my own wrist watch, so it takes me a while to understand the instructions!

Mods at this point are to increase the audio volume and change the LED indicators for one readable on the field – in sunshine.

Use of the item will make things easier.

See my pics of item as in use by me now.



Do not connect a battery greater than 6 volts directly to the airborne unit as damage may result.

AIRBORNE UNIT

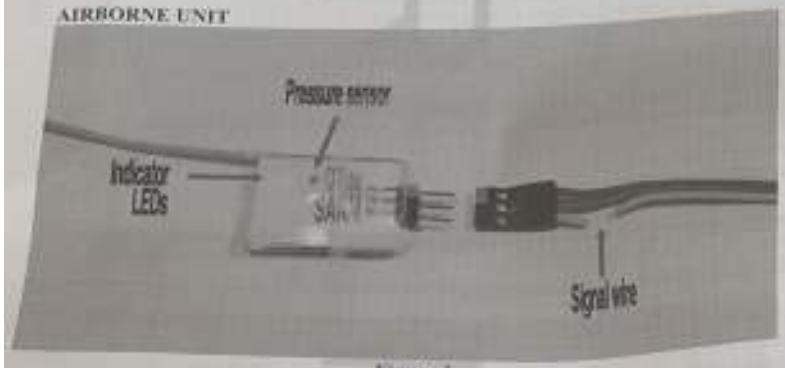


Figure I

PRESSURE SENSOR: Do not cover the pressure sensor vent. This needs to be open to the atmosphere in order to function correctly.

INDICATOR LEDs: Two indicator LEDs, used to indicate status of unit. Visible through the covering when operating.

SIGNAL WIRE: When powering the unit via a spare channel from the R/C receiver, cut the signal lead. Only the positive and ground wires should be connected.

Take care and observe the correct polarity when connecting battery or receiver

WEIGHT: 3.5gm
SIZE: 24mm x 19mm x 5mm (excluding connector and aerial)

BASE STATION

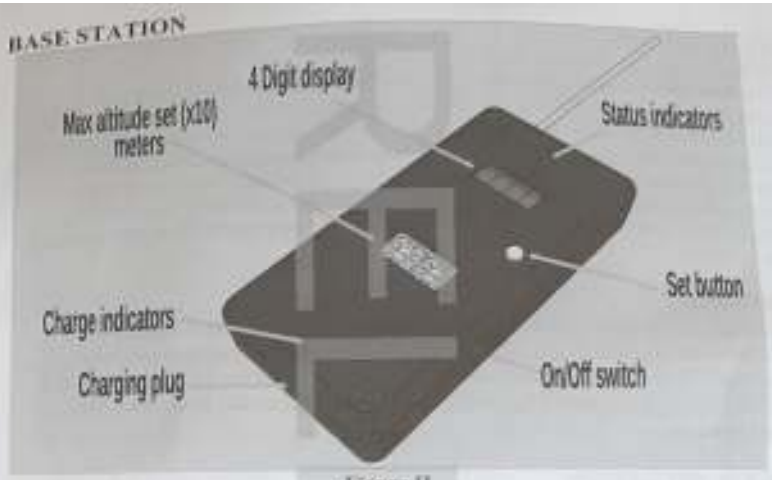


Figure II

4 DIGIT DISPLAY: Altitude and other other data is displayed here

STATUS INDICATORS: Two indicator LEDs, red and green, used to indicate status of unit

SET BUTTON: Used to set 'zero' altitude and select options

ON/OFF SWITCH: Turn unit off or on

CHARGING PLUG: Mini USB for charging internal battery

IND CA onitoring charge state.

ide, and define

OLD SPARKIES. From Peter Scott.

I have recently come by two small spark engines (see above photo) which I think are something to do with model dockyard in the '40s.

I intend to rebuild one and the other is for sale or trade.

Anyone with information on these please let me know what they are and what capacity.

I have in the last few months flown an OS 60 sparky (photo at left) in an RC1 and it ran very well until I flooded it and bent the crank web – which I later straightened, not a very strong item.

However, for 1946 this engine is arguably the most modern in the world.

It is a lapped piston bore with radial porting in the same style as AM engines, a single ballrace, front induction, and runs well using methanol on spark or glo.

The American servicemen in Japan bought a lot of these engines just after the war and would have taken them back to the States.

Looking at Ardens and a bit later, the Yulon Eagle, it makes you wonder who was copying who.

The Geezer

Official Journal of the WA Model Aero Club (inc) and SAM 270 Western Australia

SAM 270 WESTERN AUSTRALIA

SAM 270 Committee

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WAMAC STATE CHAMPIONSHIPS CONTEST CALENDAR 2020			
DATE	FREE FLIGHT EVENTS	OLD TIMER EVENTS	FIELD
4 Oct	Slow Open Power		Beverley
18 Oct		Duration	Beverley
1 Nov	Open Rubber	Old Timer Glider	Beverley
15 Nov		Texaco	Beverley
29 Nov	Combined FAI / 1/2A Power		Beverley
13 Dec		1/2A Electric / Tomboy	Beverley

SAM 270 & WAMAC Report

From Hans van Leeuwen

We still live in strange times as most of you will attest to. However, I can report that some interesting things have happened since my last report.

We have had some contests when the weather Gods allowed that and they were quite successful, though not that well attended.

We flew '38 Antique on Sunday July 19

Five fliers turned up and conditions were reasonable although a bit breezy and cold. Everybody managed to post a score, however those using ignition engines had problems getting a decent run and in the end had to retire. Rod McDonald couldn't even get his Atwood to fire so had to change to his diesel powered model. He was gifted the event by Greg McClure who had the misfortune of landing out on two flights, one a max and the other a near max which would have made him an easy winner. Some of these issues are the result of little flying and the fact that some models hadn't been used for some time.

The final results were;

1.	Rod McDonald	Goldberg Clipper	ED 3.46	1300
2.	George Car	Folly 2	Elfin 2.49	922
3.	Greg McClure	Bantam	Mills 1.3	732
4.	Ian Dixon	36 Texaco Winner	Anderson Spit	515
5.	Hans van Leeuwen	RC1	Ohlsson 60	229

Sunday, August 2, Burford Duration and Nostalgia, Beverley field:

The standard in Burford was commendably high and three of the five competitors scored three maxes to qualify for the fly off.

The winner was Greg McClure with an outstanding fly off flight over thirteen minutes.

As can be seen from the photos Greg's model looked an unlikely contender for a power duration comp but it certainly performed especially on the glide.

Hans was unlucky to have picked some bad air in the fly-off as his new model performed extremely

well during the heats.

Results:	1.	Greg McClure	Dolphin	Owen	900	793
	2.	Ian Dixon	Calypso Major	Owen	900	tba
	3.	Hans van Leeuwen	Texan	Burf BB	900	tba
	4.	Phil Letchford	Black Magic	Burf BB	308	
	5.	Rod McDonald	Crescendo	Owen	196	

Nostalgia was flown on the same day as Burford.

While we had 5 entries only 3 flew.

Nostalgia was a walkover for Ian Dixon who reeled off three effortless maxes with his 40 powered Spacer.

Hans van Leeuwen would have offered serious competition with his Lucky Lindy had he not crashed following radio failure.

Results:

Ian Dixon	Spacer	OS40H	1260
Rod McDonald	Amazoom	OS 25	994
Hans van Leeuwen	Lucky Lindy	G15	400

We've sadly had to cancel some other contests due to inclement weather and it will be tight schedule to fly the other categories before the weather becomes too hot and fire bans may prevent us from flying.

As some of you are probably aware, our Club has struggled for a flying field for a number of years. We were fortunate to secure a flying field at Beverley which is a wonderful site and suits the purpose of Old Timer flying and free flight, both of which are the main stay of our Club.

This venue has also resulted in some country people, who were ex-aeromodellers, joining our Club and thus swelling our numbers.

There were also some aeromodellers in a rural town called Toodyay, around 85 Km North East of Perth, who were trying to establish a Club in that town. They had the blessing of their local government and the local community and managed to secure the centre of the town's race course as their flying field. They contacted our Secretary and had some discussion with him and as luck would have it there was some common ground between Graeme Cooke, our Secretary, and the main proponents of the fledgling Club.

Our Club was invited to come and fly with them to sample their field and establish some rapport with them. This has happened quite successfully and the Toodyay people have decided to affiliate with our Club instead of forming their own. This has beneficial results all round. It increases our membership and gives us another flying field and it gives them the opportunity of seeing our activities and benefitting from our experience.

I'll include a separate report to outline our first experience of that venture.

Regards, Hans van Leeuwen.

WAMAC & SAM 270 update, New Toodyay Field.

Report from Hans van Leeuwen.

There has been a Club involvement with some people from the town of Toodyay for some time.

They looked at forming a Club in the town and had the backing of their local Government, the local Race Club and other interested parties. Those concerned, led by Kevin Burns have done considerable ground work and secured the use of the centre of the race course, some 2Km out of town as their flying field.

Instead of starting their own Club they asked if we would accept them as members and use their flying field for some of our Club activities. WAMAC has agreed to that and the result is that we have an increase in membership by a mixture of full and associate members and the prospect of another venue for some of the Club's activities.

We were invited to join the Toodyay people for a fun fly yesterday. Some six of our Club members travelled to Toodyay and joined around another ten flyers, some of whom had already joined as WAMAC members, and some who joined yesterday to cement a bond and to investigate the potential of the field.

The field has great potential and the welcome to it was warm. There was a mixture of old timer and sports models and some small free flight models as well. The

weather was relatively kind and all had a great time. There was plenty of flying and getting to know each other.

WAMAC will now initiate the process of making the Toodyay Race Course Field a gazetted field for our Club. We look forward to a great relationship with our new Club Members and perhaps even convert some of them to Old Timer flying.

A great time was had by all and this augurs well for future flying days or even weekends as the Toodyay Caravan Park is directly across the road from this flying field. Following are a selection of photos of the Toodyay field and the days activities starting with views of the field and flight line.

Parts of the flight line and pits Sunday, 23 August 2020

Parts of the flight line and pits Sunday, 23 August 2020

Kevin Burns' Junior 60 with red head Taipan.

Ian Dixson's Diamond Demon with Redfin power.

Some roving photos

Ian Dixon's 85% Lanzo Bomber with OS 40H for Standard Duration.
Cookie's electric Flamingo' sadly did not fly due to rudder servo problem.

TEXAN continued

From Hans van Leeuwen.

In my last report, the Texan hadn't been flown. Our weather hasn't been too conducive to flying of late, but we had a combined Burford and Nostalgia competition scheduled for Sunday, August 2.

As I use the Lucky Lindy for nostalgia, the Texan was to do Burford duty, its prime reason for existence.

Incidentally, the model originally sported a red head 2.5 Burford Mk 3, while that engine ran very well it vibrated excessively for my likings. I also had an almost new 2.5 ball race Series 13. I test ran that and it was very smooth compared with the plain bearing Mk3. I figured that the loss of 2 seconds was worth the change.

I've never been able to figure out why Gordon hardly made any engines with the same mounting configurations. Surely as a business man who wanted to sell engines, being able to substitute later model engines into existing airframes would help to sell them. Not so in the Burford mind.

The engine change meant that I had to configure another engine mount and the Texan now sports a series 13 which runs like silk.

BR Series 13 installed with new engine mount.

Saturday prior to our event looked to be reasonable weather, so I decided to test fly the model that day. My trusty friend Fred Tower accompanied me to a field

that we can use for testing and trim flying to see what this thing would fly like. After the usual preliminaries of range check and failsafe check, the engine was started servo directions checked and launched.

The thing flew like it was on rails straight off the board. After some slight trim adjustments it was landed. In all I flew 7 flights that Saturday, the climb was superb and the thing floated around and really did not want to come down even with no evident lift. All augured well for the next day.

Texan ready for its maiden flight.

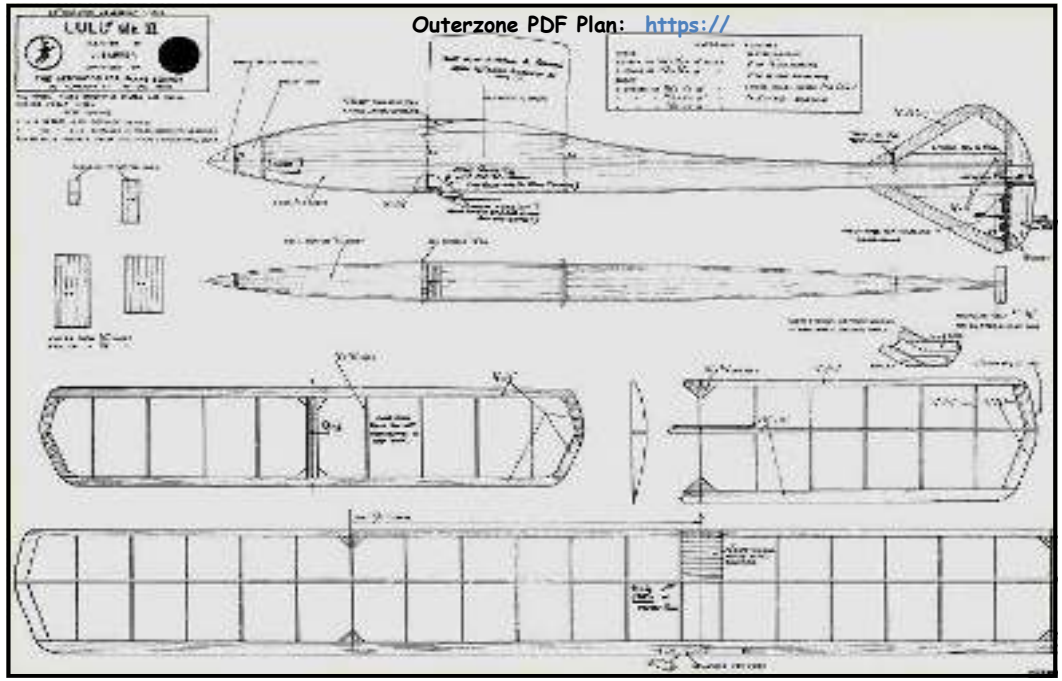
The weather on the Sunday was superb. The model flew like it was on rails and scored three maxes straight off. Sadly I picked the wrong spot to fly in during the fly-off and came third in the contest. However, it wasn't a bad effort for a maiden outing and the model is wonderfully stable and a joy to fly.

Next project is a 120% Texan with a K&B series 71 rear rotor at the front for Nostalgia.

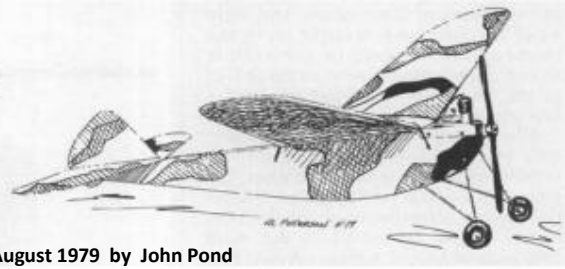
LULU ON THE LINE

by Peter Michel

THE glider pictured here is what Sticks and Tissue is all about. It is, of course, a Lulu – perhaps the simplest competitive design ever. It was originally claimed that it could be built in six hours, or something like that. Perhaps a tad of wishful thinking crept in there, but it's a very quick build for all that. But what, you ask, is the reason for that great bunch of haberdashery attached to the tow-line? Answer: This Lulu (it happens to be mine) is going up on a 50m bungee in near flat calm. In these conditions it needs a lot of drag to persuade the line to slip the tow-hook at the top of the climb-out. Hence the haberdashery (the towline 'flag' plus my handkerchief.) Thanks to our S&T editor for the great picture.



The Challenger



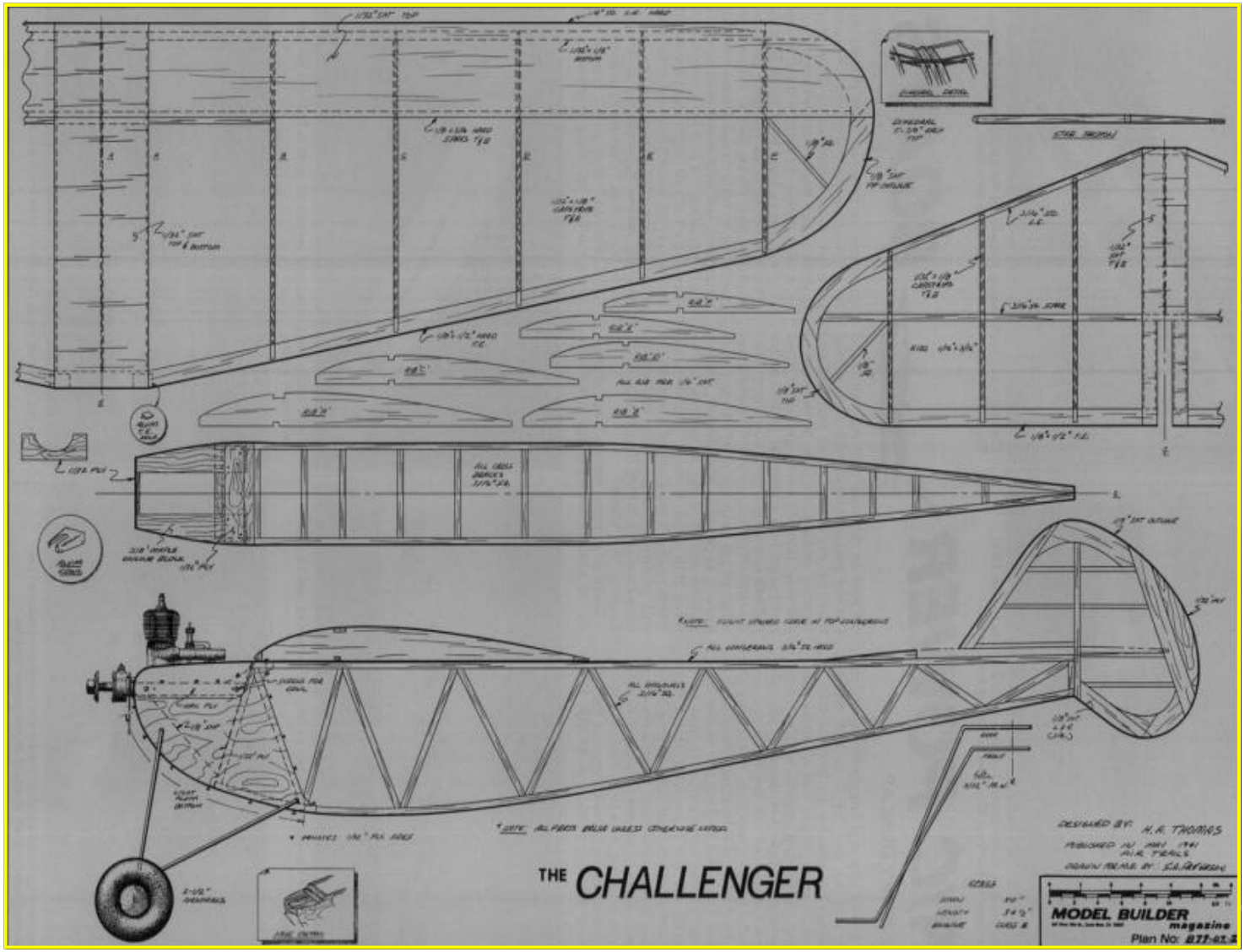
OLD TIMER Model of the Month

Designed by: H. A. Thomas
Drawn by: Al Patterson
Text by: Phil Bernhardt

From Model Builder - August 1979 by John Pond

Most any modeller who has been involved in Old Timers for any length of time has at least heard of H.A. Thomas, but go to any O.T. meet nowadays and you probably won't see even one of his many designs. That's because H.A.'s models, for the most part, were intended to be simple-to-build, steady, stable fliers, not all-out contest machines. The Challenger, featured in the May 1941 issue of *Air Trails*, is typical of his approach to model aircraft design.

According to the original test, H.A. designed the Challenger for his sister, Mary Louise, who had just won a Class B engine and needed a model for it. What else to do but to get big brother to draw up something? As it turned out, the model was quite a performer, winning 1st places in the first two contests entered.



The Challenger spans 51 inches and has a wing area of 423 square inches, which means the model has to weigh a minimum of 23-1/2 ounces to be legal for modern Old Timer contests ("modern Old Timer contests" … sounds like a contradiction in terms). Construction is the last word in simplicity and should give no problems. The only suggestion we can make is in the interest of a much stronger wing, and that is to use the time-honoured plywood dihedral brace in the centre section, instead of that dumb stick shown on the plan.

As an interesting side note, the Challenger was actually published twice, but not under the same name. In addition to the 1941 article, the model was featured in the 1943 *Air Trails Annual* and was called the Tiger. The plans and text were identical to the 1941 version, except that one of the photos was replaced by an exploded drawing of the model, showing the major components. The model was the last of a four-part series of beginner's models, starting with a hand-launch glider, then a simple all-sheet stick rubber job, then an all-sheet stick rubber job, then an all-sheet fuselage rubber model, and then the Tiger. Why the model's name was changed is anyone's guess, unless the magazine people wanted to convey the idea that the model was designed especially for that four-model series.

Old Timer fanatics who go so far as to duplicate the original model's colour scheme might want to make an exception in the case. The Challenger was painted ivory, with grey-orange, grey-green, and blue-black camouflage. Not recommended as the best colour scheme for locating a lost model!

AERO MODELLER 68 February, 1958

by George Aldrich

Combat . . . in the U.S.A.

A first-person account by America's leading stunt flier on combat procedure, incorporating this specially commissioned Aeromodeller design for 2.5 to 3.5 c.c.—named after the Colt .45 revolver

Whichever way one views the Peace- or Piecemaker, its lines create a new fashion

"WHEN I WALK into the circle to fly combat, the first thing I do is to seek out my opponent. Our conversation will go something like this: "Hello there, my name is George Aldrich, and I'd like you to know that if you tear up my airplane and engine there will be no hard feelings—for I'll be trying to cut your streamer and the same thing may happen to you". Here is the keynote to having fun when you fly combat. After almost 10 years at the game it is a foregone conclusion that you are going to tear up models, and plenty of them! Every time your author flies combat he plans on total loss of model, engine, tank, lines. If you are not willing to accept this, try flying scale or team racing.

"So much for the mental attitude toward one's own model.

"After many systems over the years we have gone back to what we originally started with down in Texas in 1948, Process of Elimination! This is the only way a contest can be conducted with any degree of fairness.

"The following is a simple set of rules which are the accepted basis for good combat competition in our country."

Basic Rules for Combat

I. Pull Test.
(a) One pound of pull for each hundredth of cu. in. displacement. (Example: .15 cu. in. (2·5 c.c.)= 15 lb. pull.)

II. Streamers.
(a) A chosen length.
(b) 36 ins. of twine attached to the model and to the streamer so as to have no less than 24 ins. between nearest portion of model and the beginning of streamer.

III. Pairing of Opponents.
(a) All names put in a hat and the opponents drawn.
(b) Pairings are posted on a board in the manner used in most tennis matches except there is no seeding.
(c) With each pairing a flight time is given. When the opponents names are called they will have already had their models pull tested and cleared by the officials. They will then proceed to cross the circle and tie on their streamers of opposite colour. Two minutes are allowed for this.
(d) The contestants are then given 3 minutes to get airborne. If one should not get airborne within the 3 minute time limit, he is eliminated. If both contestants fail to get airborne they are re-scheduled at the end of the list.
(e) If one or both contestants are not ready upon the calling of their names they are eliminated. (The tying on of the streamers may be done in the pit area if officials are available.)

IV. Flight.
(a) Total flight time 5 minutes.
(b) The 5-minute flight time begins when the first contestant becomes airborne.
(c) One complete level lap is required with both models in the air before combating may commence. (If a pass is made by either contestant disqualification is made of the contestant making the pass.)
(d) Scoring is based on the following:
(1) If only one cut is made by each flyer the contestant with the longest streamer wins.
(2) All other scoring is based on the number of cuts made by the contestants except in the case of a kill.
(3) "Kill"—A "kill" is made by cutting off all of the opponent's streamers including the knot where the streamer is attached to the string.
(e) More than one level lap at an altitude below 8 ft. shall lead to disqualification.
(f) More than one level lap while the model is in an inverted position shall lead to disqualification.
(g) (1) In the event of a mid-air collision the judges shall decide which flier was at fault and he shall be eliminated.
(2) If the judges decide that neither contestant was at fault they may re-match the flight at a later time.
(h) If a contestant at any time releases the handle while his engine is running he shall be disqualified.
(i) A contestant may land, refuel, and take off as many times as desired as long as the 5-minute flying time has not expired.
(j) A contestant shall do all in his power to keep his model airborne during the 5-minute flying time.

V. General Rules.
(a) Any contestant who conducts himself in an unsportsmanlike way shall be disqualified.
(b) Officials.
(1) Event director.
(2) At least two judges.
(3) Pull test and safety inspector.
(c) Number of Models.
(1) No limit.

VI. Example of a Match:
(a) Contestants names are called and they are given 3 minutes to get into the circle and tie on their streamers.
(b) Time is called and the 3-minute starting time begins.
(c) Models airborne—5-minute flight time.
(d) When the last contestant's engine cuts the next pairing is called immediately.
(e) Total elapsed time—10 minutes or 8 minutes if streamers are attached in the pit area by officials.

"As you can easily see, this set of rules is designed to make a contest really move along. Which, with the mass of entrants in combat events is most necessary. It is also advisable to have more than one circle for obvious reasons. Then the winners from each of the circles can vie in a grand finale, which is a great "crowd pleaser".

"Now, we come to my little *Peacemaker*. The pre-requisites for any combat model are as follows: (1) Simplicity; (2) Ruggedness; (3) Manoeuvrability; (4) Speed; (5) Inexpensiveness.

"I have flown my *Peacemaker* with a variety of both diesels and glow plug engines in the 2·5 to 3·5 c.c. class. Speeds ranged from 65 m.p.h. to 80 m.p.h. This is in great contrast to our models over here in the U.S. where we have no noise problem. My own *Flite Streak* design is flown at speeds above the 100 m.p.h. mark with the Fox Combat "35" for power.

"The construction is very easily seen on the plans, however, there are a few hints which may be of aid.

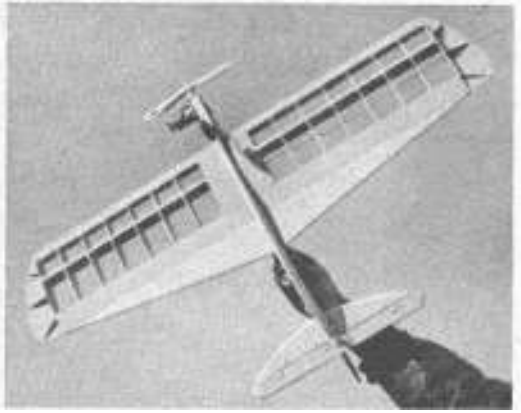
"Any stunt model be it combat or precision is built around its wing. Therefore, if your *Peacemaker* is to be a top performer, you must have a straight wing. After slipping the wing ribs on to the $\frac{1}{16}$" sheet spar, add the leading edge and then the trailing edge but *do not* cement the ribs to the spar. In this way the wing can be properly aligned. The $\frac{1}{4}$" × $\frac{1}{4}$" spar caps are now added. Now cement the three centre ribs into place, and install the 2-in. bellcrank and leadout wires. The tips are now cemented in place and the $\frac{1}{32}$" o.d. tubing lead-out guides installed on the bottom face of the in-board wing tip. The centre planking of $\frac{1}{16}$ sheet may be installed and now the remaining ribs are cemented on all sides to the "I" beam spar. The wing is now ready for sanding.

Structure of AEROMODELLER Test Model shows super strength. For leading edge and full depth I section spar

"After completing the fuselage the wing may be installed and the $\frac{1}{4}$" sheet trailing edge pieces cemented in place. A strip of gauze should be cemented all around the wing where it passes through the fuselage.

"Now install the tail section, double glueing all joints.

"The pushrod is now bent and a 1-in. square of the $\frac{1}{16}$-in. sheet planking is cut out directly over the bellcrank. You must also cut a slot about $\frac{1}{4}$ in. by $\frac{3}{4}$ in. in the $\frac{1}{16}$" planking as shown on the plans. You may now install the pushrod by loosening the bell-

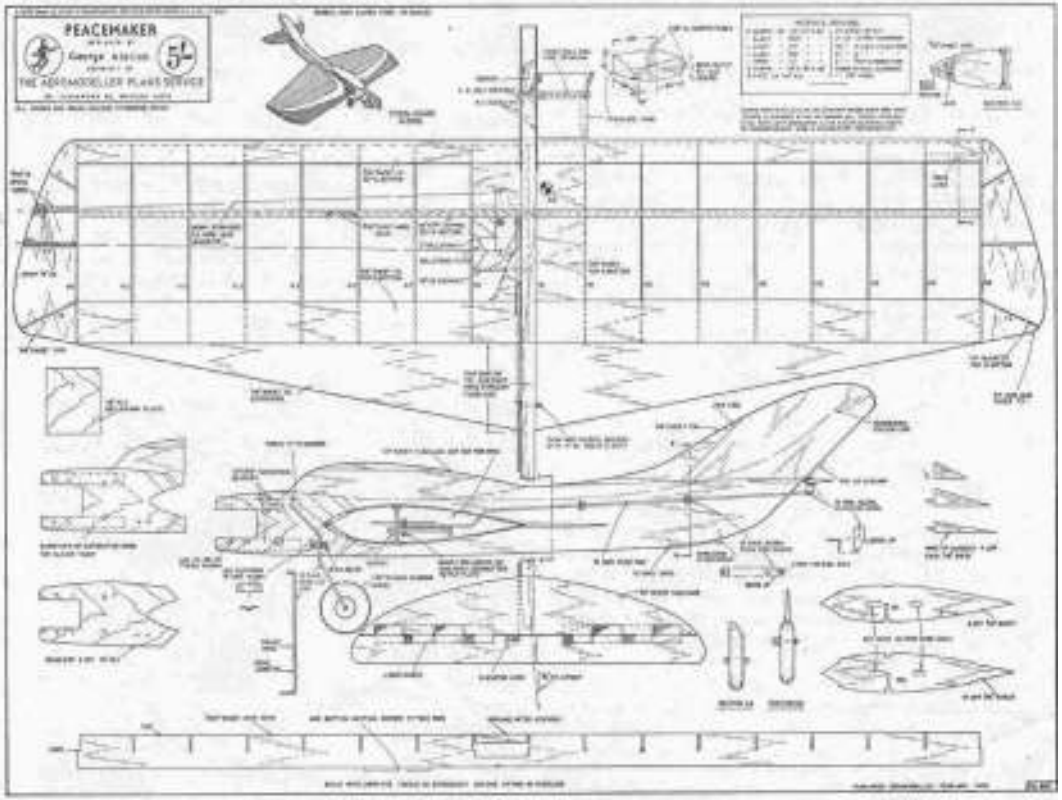


crank bolt slightly and then tightening the bellcrank down again. Do not neglect the push rod braces as they are essential to positive reaction. Also replace the 1-in. square of $\frac{1}{16}$" sheet planking.

"A good procedure for finishing is to apply a heavy coat of clear dope to the entire model and sand well. Next the wing should be covered tnet, being sure to keep all panels damp until the job is complete. A total of approximately four more coats of heavy clear dope are now applied, sanding between each application. You may also add three or four additional coats to the nose section for protection against oil penetration. Coloured dope may be added if desired, but remember extra dope adds weight and weight cuts flying speed.

"The writer sincerely hopes your *Peacemaker* affords you many enjoyable hours. You may care to know that my personal prototypes have performed square four-leaf clovers, square vertical eights, square horizontal eights, triangular vertical eights, octagons, and many others with ease.

"It is my lingering wish that I someday may visit England and attend one of your rallies. From the stories Bob Palmer has related to me I'm sure there is more for me to learn from you than you so modestly say you have learned from us."—**George Aldrich.** *(seen at right with his prototype)*

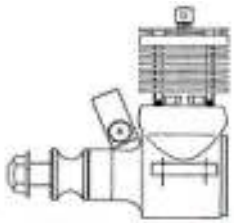


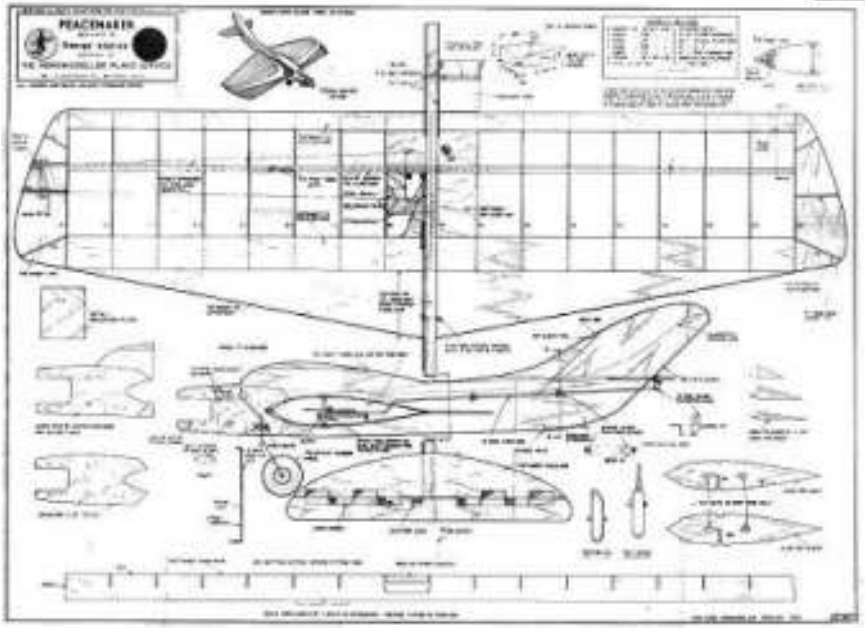
FULL SIZE COPIES OF THIS 1/6TH SCALE REPRODUCTION ARE AVAILABLE PRICE 5/6 POST FREE FROM AEROMODELLER PLANS SERVICE

Peacemaker, George Aldrich, Oliver Tiger

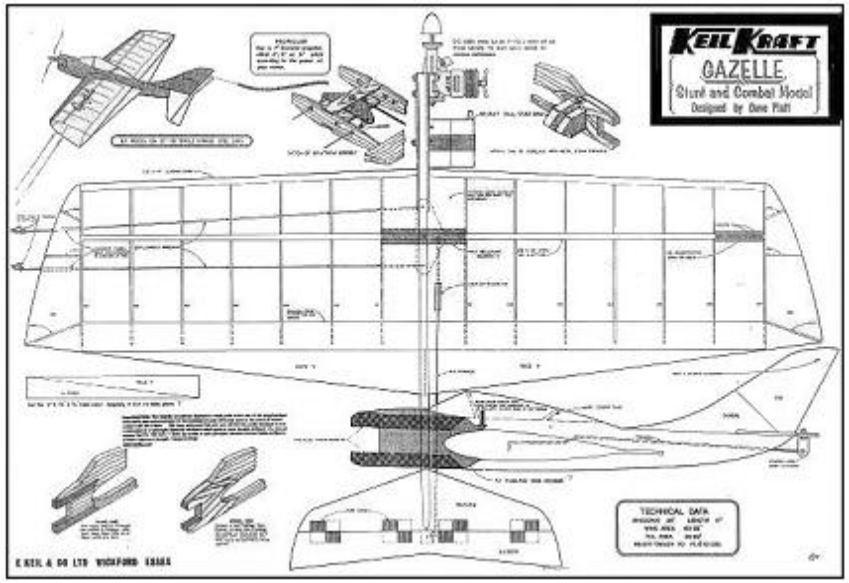
What else can be added? Well.....

From Sticks & Tissue





John Taylor, after the Sorcerer, went on to build the first Peacemaker in this country (UK) from the plans that Ron Moulton obtained directly from George Aldrich. Powered, of course, by a brand new Oliver Tiger that he had previously won.



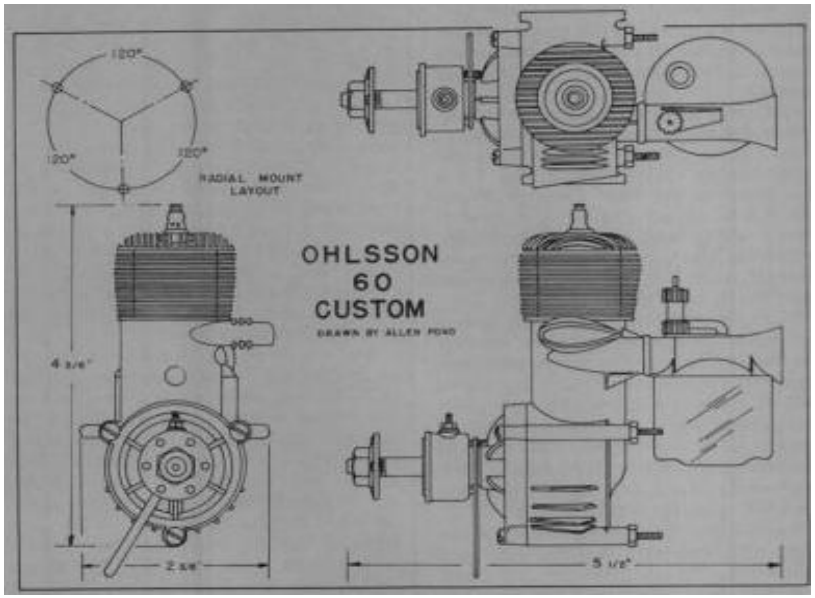
KK Gazelle - Interesting to have alongside Peacemaker, I thought. Obviously there are absolutely no similarities.

ENGINE OF THE MONTH

From Model Builder Magazine February 1984 by John Pond.

Having turned the engine manufacturing business literally on its ear in 1938 with his sensational Ohlsson 23, Irwin Ohlsson decided to come out with a big brother based on the successful layout of the 23.

In March 1940, the Ohlsson 60 Custom made its debut in a more sensational manner . This sixty was at least two thousand rpm better that the Brown and other comparable motors. Here was an engine that started easily, had excellent power, was easy to disassemble and repair, and best of all, it lasted!



As with the Ohlsson 23, this new 60 brought out a rash of new models designed to accommodate the power. Even Carl Goldberg's *Sailplane* design was a direct effort to take advantage of the powerful new engine. Ohlsson had established another standard for all other engines to be compared against!

When the first advertisements appeared in the March 1940 issue of *Model Airplane News*, this new engine featured a diecast tank top (with a "*Jiffy-Fill*" tank) with an integral air intake tube flared for a venturi intake shape. A very neat setup!

The initial engine featured a 1/4-20 spark plug and a 1/4-inch diameter crank-shaft priced at $21-50. In 1941, the plug size was increased to 3/8 as was the crankshaft. Also during this time, the Custom engines were fitted with a gold eagle on the front of the case. According to Herb Wahl, noted Ohlsson expert, the eagle did not appear on the first models, being simply stamped "60" on the fusion plug on the crankcase front. (The *Flying Aces Engine Review*, December 1940, shows this). However, most everyone remembers the Custom with that fancy eagle emblem.

On the specifications of the engine, a displacement of .617 cu.in. was listed in a *Model Airplane News* table of engines. This error in calculation, where the displacement should have been listed as .604 cu.in., has been perpetuated in subsequent publications with no corrections made.

Technically speaking, the new Ohlsson engine featured a die cast crank-case and manifold unit (including exhaust stack). The cylinder and head, machined from one piece of steel, was the spot-welded to the crankcase unit. This was a system devised by Ohlsson that set it apart from all other engines.

The Custom model also featured roller bearings to support the crankshaft plus ball bearing thrust bearings to take up the horizontal play. Ohlsson, always one for making things last, provided oversize crankpins and wristpins for the engine. Very few Ohlsson engine owners ever complained about these items… even after extensive running!

The only was the modeller could get into the engine was through the removable front cover which, when removed, took the whole front end timer assembly and crankshaft off. The engine could be inspected, but there was simply no way for the modeller disassemble the engine, a mixed blessing in that one could not tinker with the engine.

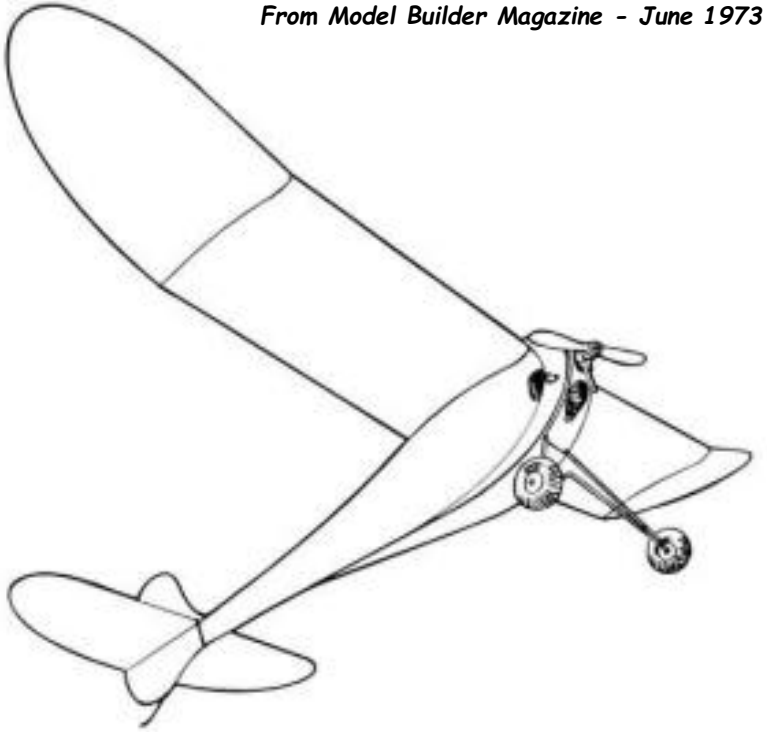
Specifications of the engine called for a bore of 15/16 in. and a stroke of 7/8 in., giving the displacement of .604 cu.in. The weight was 10 ounces bare, and it was priced at $21.50, a competitive price to the Brown Junior. Performance figures as taken by the *Air Trails* Strobatic tests, rate the engine at 1/4 h.p. with 6700 rpm using a 14 in. Flo-Torque propeller, 7000 rpm with a high pitch, 12 in. prop; and 7700 using a 10 in. dia., 10 in. prop. In any case, the maximum power was stated to be at 7500 rpm.

Shortly after the introduction of the Ohlsson Custom 60, the Ohlsson 60 Special was advertised in the October 1941 *M.A.N.* issue with the attractive price of $18.50. There apparently was only a slight difference in power output and for the difference of $3, most modellers purchased the Special.

As time went on, the Ohlsson Custom production dropped, and the Ohlsson Special became the well-known Ohlsson 60. As pointed out before, the engine became the standard of the model manufacturing business. All subsequent engines either benefitted of suffered by comparison to the "Standard".

Ohlsson .60 Custom (1940)

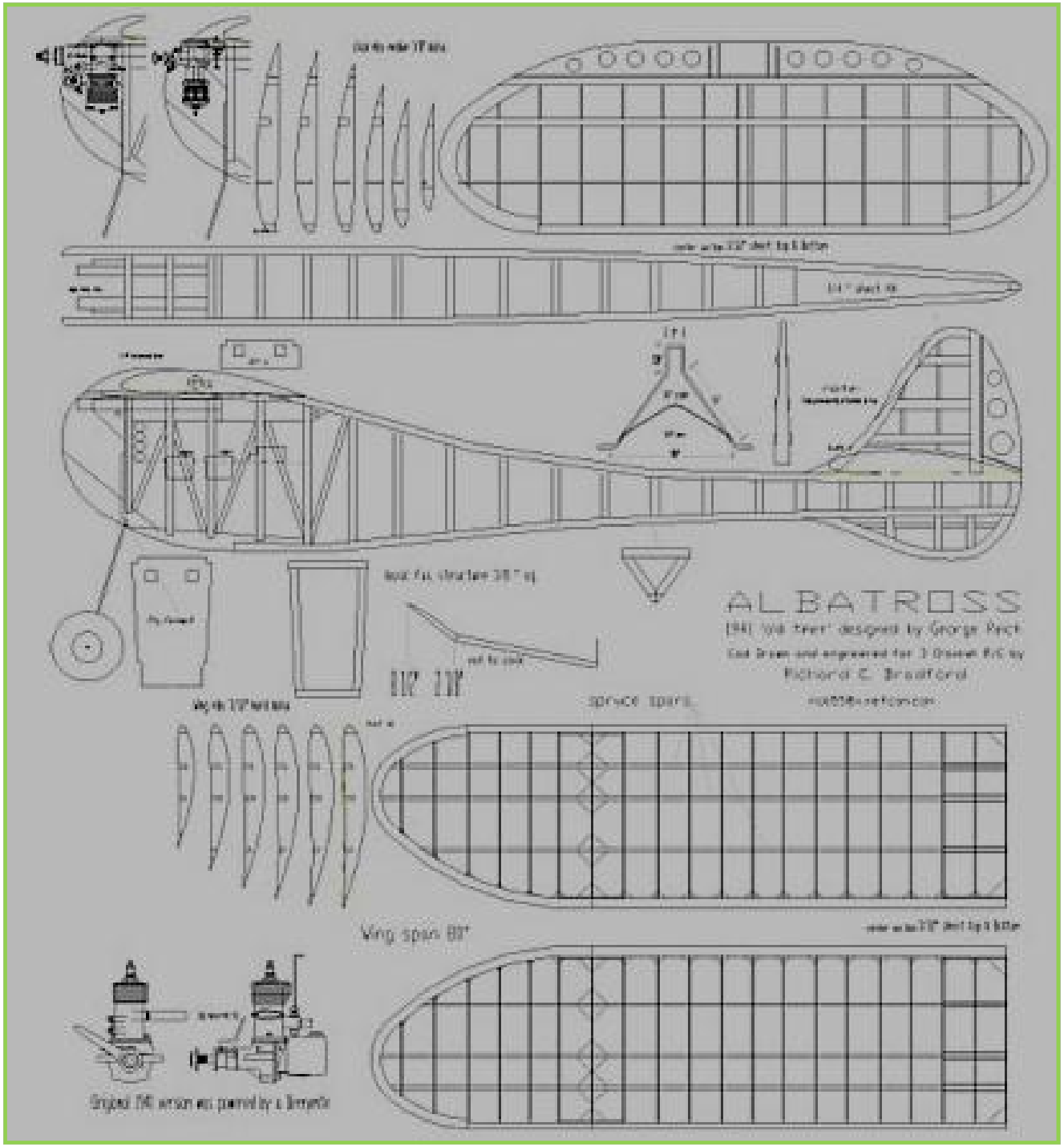
From Model Builder Magazine - June 1973



O.T. MODEL of the MONTH — The ALBATROSS, designed by George Reich

The Albatross was originally published in AIR TRAILS magazine . . . April 1941 issue. George Reich may be better known for his designs and accomplishments in Wakefield, but in our estimation, this is one of the most beautifully proportioned gas models of all time.

The original Albatross used a Dennymite engine (ignition, of course). However, it was suggested by the designer that the lifting stab thickness be increased to about 13/16" if a more powerful engine, such as an Ohlsson 60, is used. (George felt that a lifting tail of proper thickness would eliminate the need for downthrust.)



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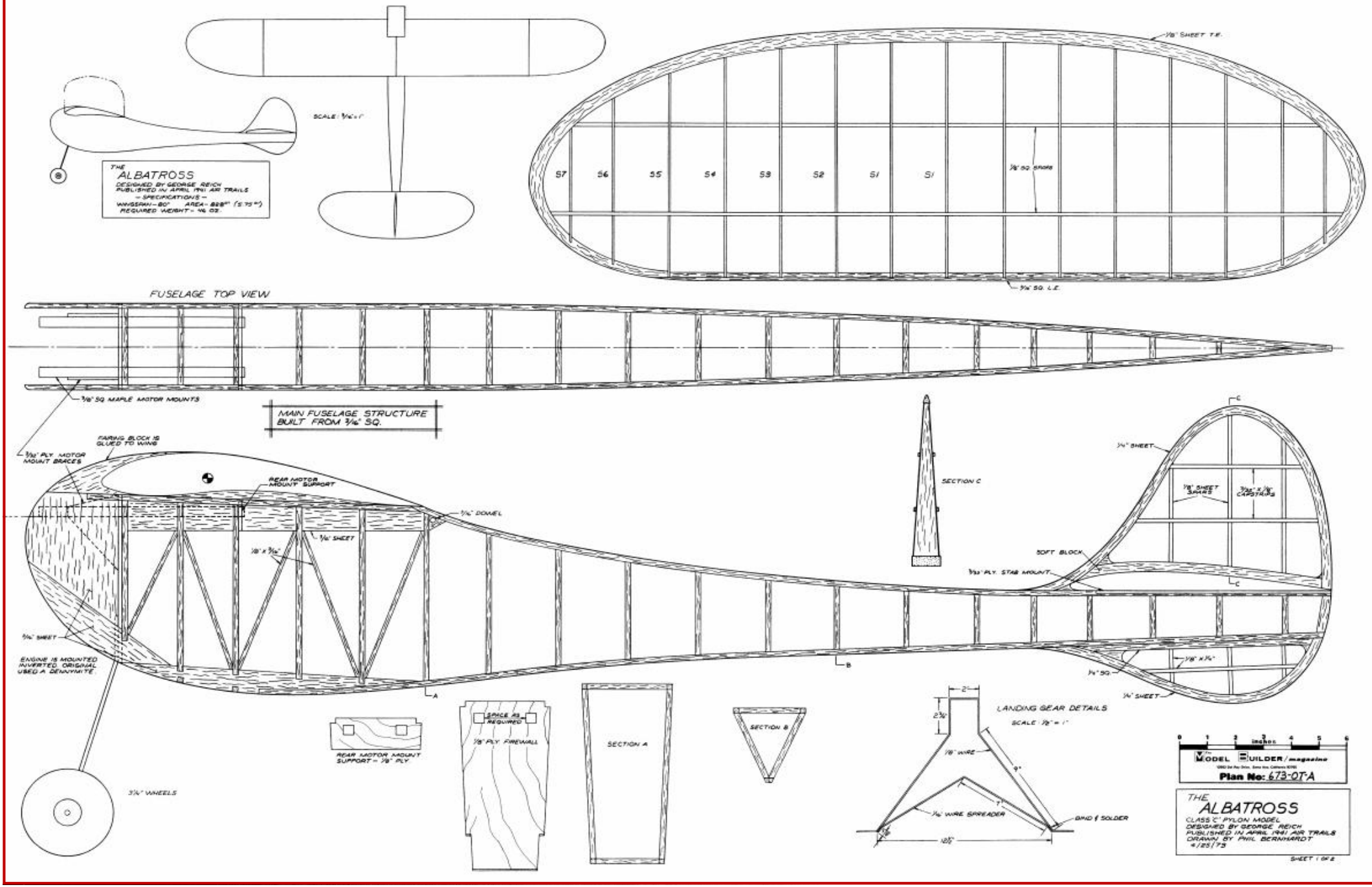

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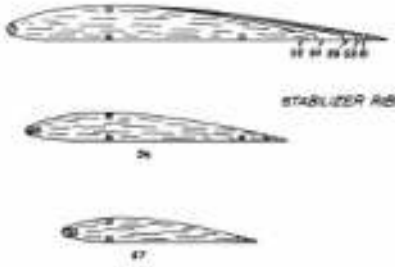
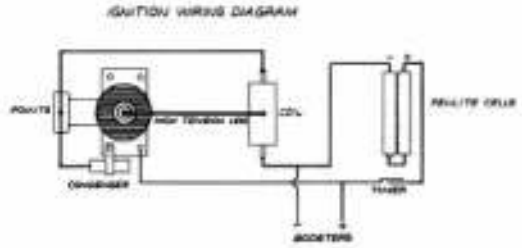
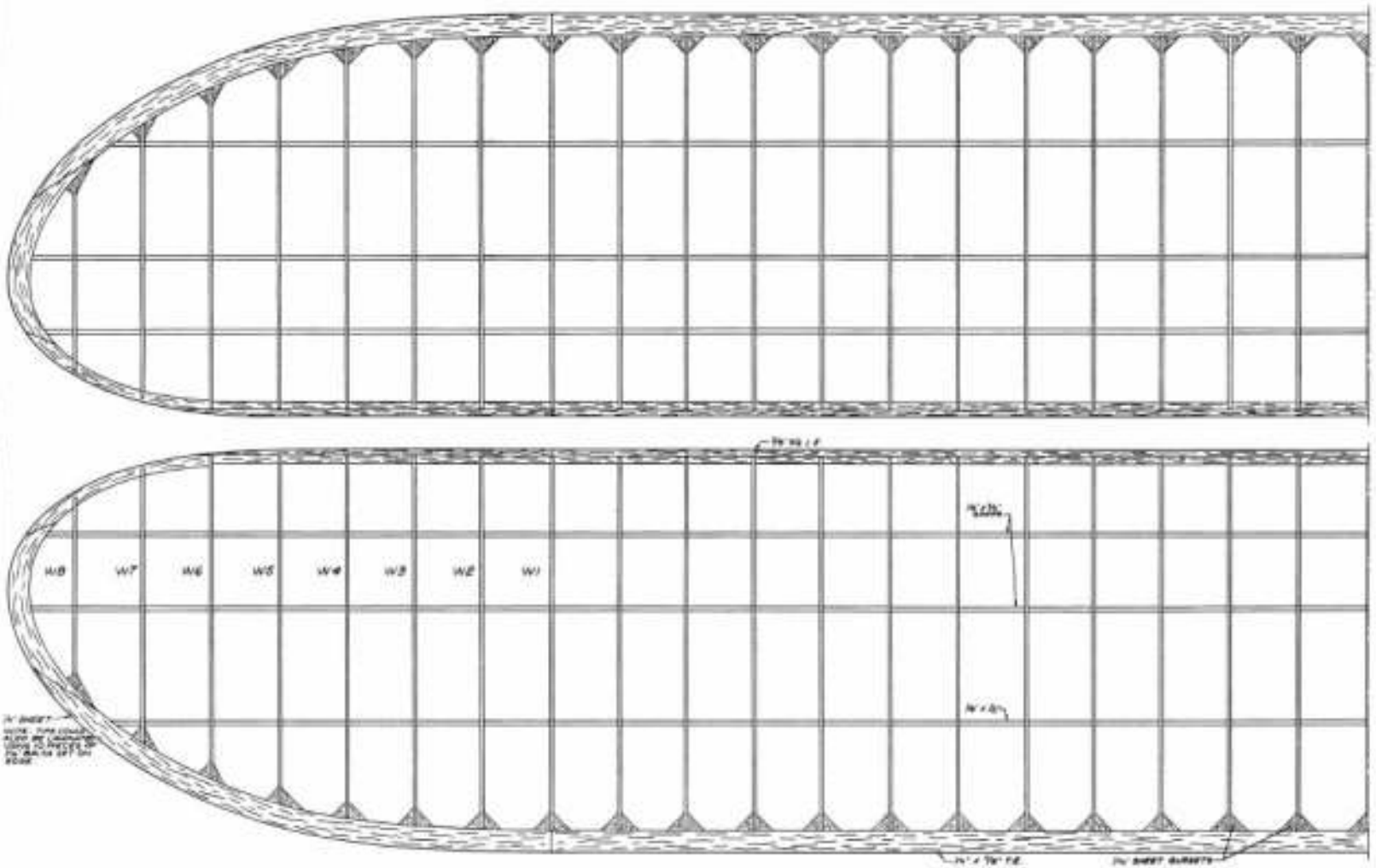
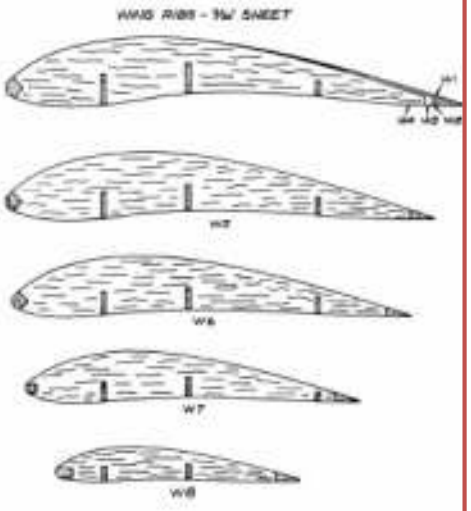
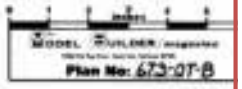


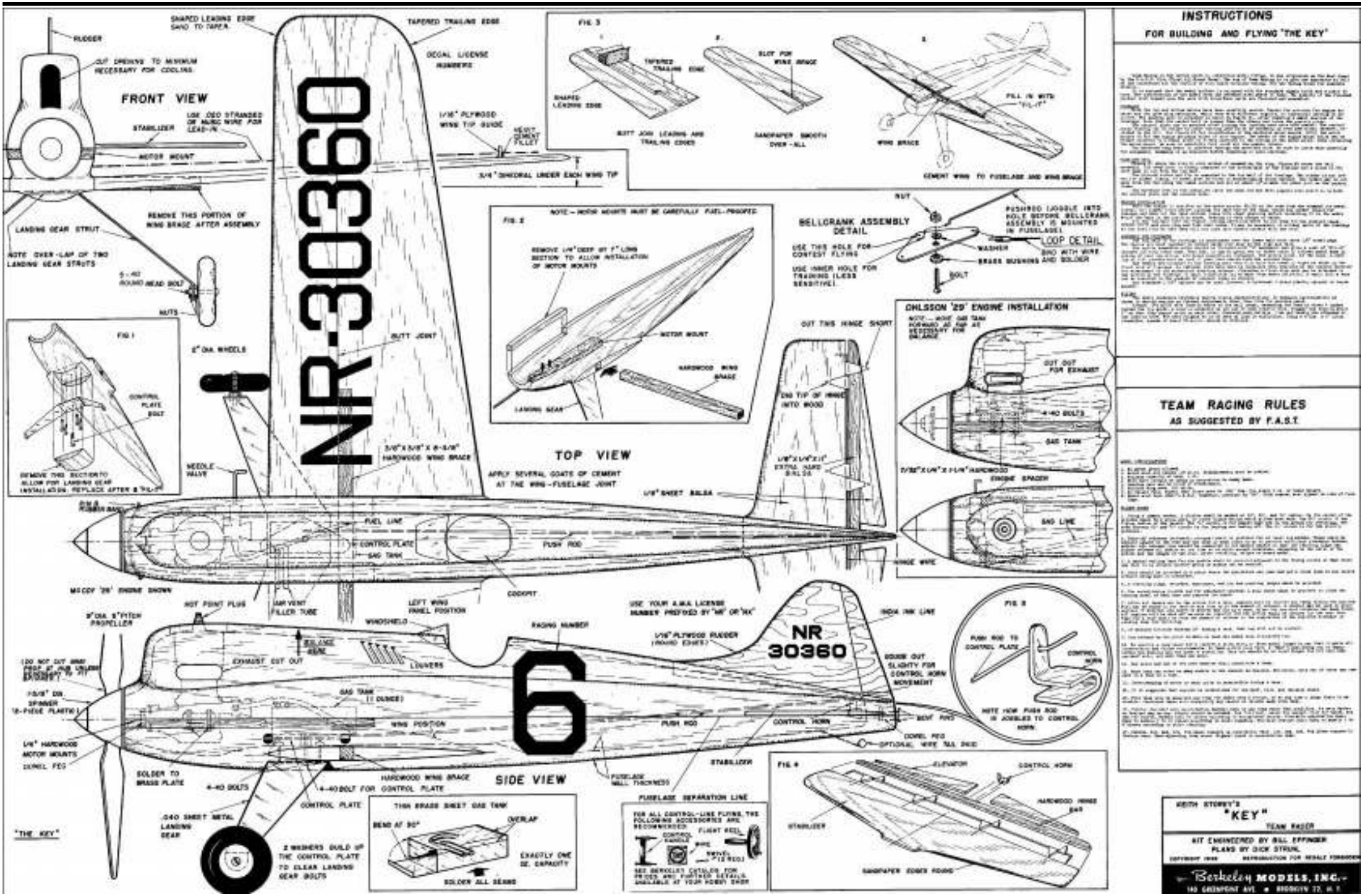








April 1939 Model Airplane News



Fullsize PDF plan: http://controlline.org.uk/phpBB2/viewtopic.php?p=192651&sid=79cf9cdb188a6c2f403951783758c0c7#192651

The KEY Team Racer


The fantastic St.Albans trophy in memory of Michael Barton. Michael visited Australia a couple of times including visits to the Lithgow Oldtimer events in company with Basil Healy.

For Sale Kits R/C, C/L, F/F

All proceeds go towards improvements at the AB Field West Wyalong

R/C Playboy Senior	$120	80" by Old Fashioned Hobbies	Good
R/C Playboy Senior	$120	80" by Old Fashioned Hobbies	Good
R/C Lanzo Bomber	$120	90" by Old Timer Aircraft	Good
R/C Lanzo Bomber	$120	90" by Old Timer Aircraft	Good
R/C Lanzo Bomber	$120	90" by Old Timer Aircraft	Good
C/L Peacemaker E/B		35.5" by Old Timer Aircraft	Good
R/C Precedent Bi Fly	$150	48" by Balsa craft England	Good
Rolladen Schneider LS3 R/C	$120	110" Foam wings Glass Fuse (2 fuselages one is T-Tail)	Good
R/C Giles 202	$150	1400mm ARF	Good
2 Hangar Rats by Max Starick	$20 each		Good
R/C Stiletto	$50	by Dave Brown (short kit)	Good
R/C Hotdrop	$50	by Dave Brown (short kit)	Good

E/B indicates that I am or will eBay these items

Contact Roy on 0413588720 for prices and more details


Happier O/T Times…..in 2014 At Canowindra 1788 SAM Champs.

CITYHAWK EVTOL FLYING CAR BY URBAN AERONAUTICS WILL RUN ON HYDROGEN

The Cityhawk eVTOL flying car by Metro Skyways, a subsidiary company of israeli-based aerodynamic technologies developer, Urban Aeronautics, will run on hydrogen. Cityhawk is based on the company's cormorant design and constitutes its flagship fancraft model. The futuristic vehicle will now come in an eVTOL (electrical vertical take-off and landing) version, powered by hydrogen, which, according to the company, is the only 100% environmentally friendly power source.

Urban Aeronautics' Metro Skyways has been developing fancraft, a technology that makes it possible to design a vehicle that is actually the size of a car and can carry the same number of passengers but can fly with no exposed rotor. As such, Cityhawk, its flagship fancraft model, can take-off and land anywhere, any time, in any weather. Including the pilot, it can accommodate up to six occupants in a cabin 50% larger than a comparable helicopter.

Today's fancraft vehicles are designed to utilize hybrid propulsion; tomorrow's fancraft will run on hydrogen. According to the company, hydrogen is the only 100% environmentally friendly power source, as it can be produced using solar and wind power. Unlike batteries, hydrogen fuel cells don't have a limited life cycle and generate zero toxic waste.

'Today's innovation needs to anticipate tomorrow's technology in order to optimize it's potential,' states metro skyways. *'Fancraft are designed in order to accommodate evolving technologies ranging from AI to energy, as they mature. These are aircraft that will be around for decades to come.'*

Metro Skyways is building and testing its aircraft using the most powerful source of propulsion available today: a conventional turbine engine fuelled by jet fuel. By doing this, the company is able to design an aircraft today that has all of the attributes and capabilities of its ideal flying car for tomorrow with the knowledge that it will meet up with its ideal fuel in a few short years.

MISCELLANEOUS TIPS about IGNITION SYSTEMS - Polarity of a Spark Coil

From Roy Bourke roybourke@yahoo.com

Connection diagrams for spark ignition systems used on Original Ignition engines usually show a polarity on the terminals of the coil, yet coil manufacturers do not clearly mark the polarity on the coil itself. So when using a coil for which the original instructions are not available, how should the connections be made?

A coil will produce a spark regardless of the polarity of the connections to its primary circuit. But it will usually produce a better spark one way than the other. Assuming the primary and secondary of the coil are wound in the same direction over the iron core (rather difficult to determine!) the coil will work best when connected in the form of an autotransformer as in Figure 1. So how do we determine which is terminal A and which is terminal B?

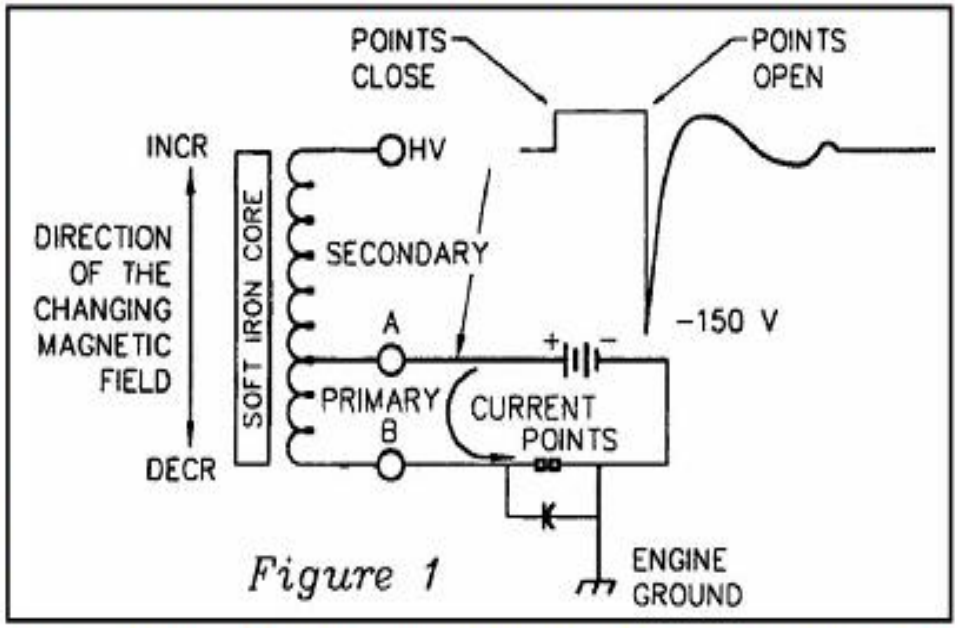


Figure 1

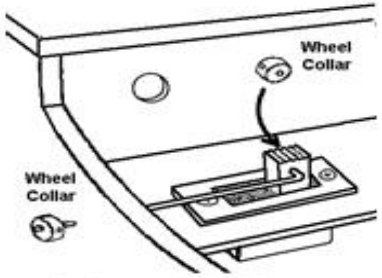
In his article on "Spark Pulse Polarity and the I.C. Engine" (Feb. Mar. 1997 of Strictly I.C.), Floyd Carter describes a method suggested by the Ignition Manufacturers Institute. Connect a single 1-1/2 volt dry cell (or a single nicad) to the coil's primary terminals (A and B) without regard to polarity. Connect a DC voltmeter so the negative (-) lead is connected to the negative of the cell, and the positive (+) lead to the HV terminal of the coil. If the meter gives a positive reading (+1-1/2 volts) then the coil is connected according to Figure 1, so you can label the coil terminals with the polarity as shown in Figure 1, and connect it that way in the ignition system. If the voltmeter shows no indication (0 volts) then the initial connections to the coil terminals were incorrect. Simply reverse the connections to A and B and try again.

Shave Can Caps

If, like me, you use canned shave cream, keep the caps from the used cans.

These plastic caps make great containers for mixing resins- be it epoxy, polyester, JB Weld, Bondo or whatever. Several ounces can be mixed in the caps, enough to join wings or other fiberglass projects. Or, turn it over and use the flat "top" to mix up just a bit of epoxy for a small job. Generally, the excess leftovers can be popped right off the cap when cured. I use a piece of scrap balsa, cut to an appropriate point, to mix and apply resin, or a throw away brush for `glass' work.

Just leave the balsa or brush in the leftovers and use that as a "handle" to pop the cured resin out of or off the cap when cured. Each cap can be used several times this way.



An Internal Switch

Internal On-Off Switch

Mounting your receiver switch internally isn't too tough - here's one way. Just put in a piece of lite ply to mount the switch, drill out the hole in the switch as necessary to insert a piece of 1/16" music wire, and secure with 1/16" wheel collars.

Why mount the switch internally? Looks, mostly and especially for a scale model. Also there is less chance that an internal switch will get dirt, water, or fuel in it.

Note: Most modellers will mount the switch such that it's **OFF** pushed in, and **ON** pulled out. This lessens the chance that bumping it during handling will inadvertently turn the switch on, and run down your batteries.

A STUDENT HAS REBUILT THE MACHINE THAT FIRST CRACKED GERMAN ENIGMA CODES.

A student at the University of Cambridge built the first replica of the 1930s Polish cyclometer.

By Daphne Leprince-Ringuet - July 16, 2020

A masters' student at the University of Cambridge, Hal Evans, has successfully built the first fully functioning replica of a cyclometer – a machine built in the early 1930s by Polish mathematicians to help decipher secret messages sent by the Germans via Enigma machines.

About the same size as a very big laptop, but much heavier, with ten-kilograms worth of wires, switches and rotors, the 21st century version of the cyclometer is currently sitting in the living room of Evans' tutor Tim Flack, a lecturer in electrical engineering at the University of Cambridge, who is carrying out some lockdown research on it

Just like the original, Evans' cyclometer can build a giant catalog of all the potential ways that plain text could have been translated into Enigma cipher text by the Germans' technology. The machine semi-automates the process of identifying and cataloging the outcomes of every possible piece of Enigma code produced in the early days of the German protocol.

As he demonstrated how the machine works over Zoom, Flack explained that the cyclometer was an early example of cryptographic genius, and that it played a huge role in Alan Turing's development of the Bombe, which was used to crack the German Enigma code during the Second World War.

"Turing's Bombe came about at a point where the Polish methods were no longer sufficient because the Germans had upped security to such an extent that these methods no longer worked," Flack told ZDNet. "But the Bletchley Park people couldn't have done what they did without information from the Polish cryptographers."

The original Polish cyclometer was built by a team led by cryptologist Marian Rejewski in the 1930s, in response to the threat of another war with Germany. At the time, the Germans were already using the Enigma machine to communicate encoded radio messages.

The Enigma protocol was based on a mechanism that scrambled the 26 letters of the alphabet. A sender would enter text on the machine, with each letter triggering another one to light up on a different keyboard. The new text made of random lit-up characters could be typed into the receiver's machine, to transform the cipher text back into readable plain text.

The mechanism that transformed plain text into lit-up cipher text was defined by a complex system of letter rotors, reflectors and plug boards. One Enigma machine typically came with a set of three rotors, each of which could be set to one of the 26 letters of the alphabet. The way the rotors were set, positioned and ordered defined which light would switch on to create the cipher text.

All in all, there were hundreds of thousands of ways that one could set up the machine before sending a message. That set-up constituted the message's key, and it was shared by the sender and the receiver to decrypt communications. To make things harder, the Germans would regularly change the key, effectively making Enigma communications almost unbreakable.

The modern-day cyclometer is about the same size as a very big laptop, but much heavier, with ten kilograms worth of wires, switches and rotors.

"One way to do it would be to take an Enigma message, type in a few random possible messages to see if they match it, and see what comes out of it, but it would take you millions of years before you were lucky enough to find a match," said Flack. "You had to reduce the number of possibilities, and that's what the cyclometer was built for."

The cyclometer created a huge catalog of possibilities by calculating and indexing the characteristics of every one of the 105,456 starting positions of the Enigma machine. Using two back to back Enigma systems, and, according to Flack, "complex mathematical theorems", the machine was able to automatically lay out all of Enigma's permutations.

Once this database was created – at the time, it took a year – it only required ten to twenty minutes to figure out what the daily key was for the German messages, if enough messages were intercepted and referenced against the catalog.

"The amazing achievement of those Polish mathematicians was that using pure maths, lots of intercepted messages, a bit of luck, and some trial and error, they managed to deduce how everything was wired up in the

military Enigma machine," said Flack.

It took over one year and a highly motivated student to achieve the modern-day replica of the cyclometer – a feat that had never been accomplished before due to the cost and mechanical complexity of reproducing the original machine. While some software versions exist, re-creating the decades-old hardware has often, according to Flack, "ended in glorious failure".

His student Hal Evans based his research on limited surviving historical information about the cyclometer to draw the machine's mechanical and physical designs. Evans sourced reflectors and rotors, which are made up of several thousand parts, from a specialist machinist in Germany; but he manufactured the rest of the components of the replica from scratch in the University's department of engineering.

Flack praised the persistence of his student: "He is a no compromise kind of guy," he said. "He wanted to make the thing as faithful to the original machine as possible. For example, the front panels are made of Ebonite, which is hard to get hold of these days, and yet he could have just made it out of plastic, or got some bits 3D printed."

The final machine is an exact copy of the original, complete with silk-insulated wiring and waxen-linen cable lacing throughout. That is not to say that the project went smoothly all the way through: Flack, for instance, remembered the tricky moment when the two sets of rotor systems had to be combined with various switches and light bulbs.

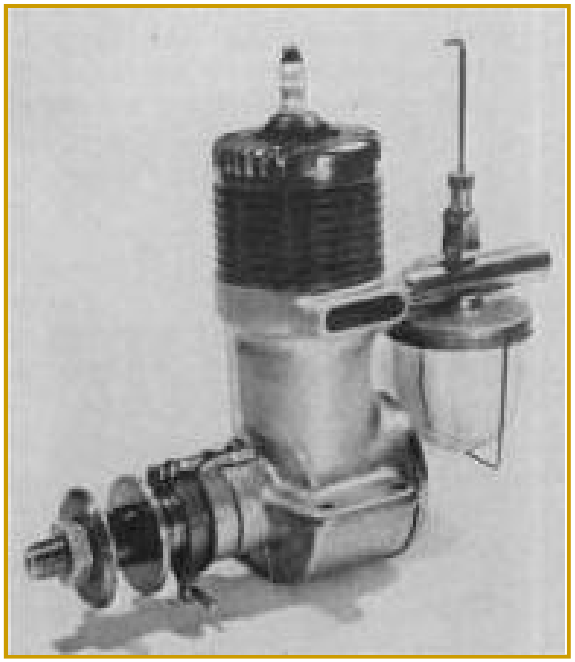
"You have to imagine we had 26 separate wires coming from the sets of rotor systems, and then all the internal wiring to the bulbs and switches. Once you cut those wires, it's a bit irreversible," said Flack. "We had to take that leap of faith where you interconnect it all."

Rather than risk it, the team tested the technology on a printed circuit board first. Rightly so: as it turned out, the system didn't work the first time around. After debugging the machine, Evans and his tutor realized the issue had only come from a faulty soldered joint, and before long, the cyclometer was up and running again after all these years.

GOLDEN EAGLE IGNITION ENGINE

Old Timer enthusiasts who like to have something a little bit different should take a look at the new (1980) "Golden Eagle" ignition engine being produced by old engine buff Karl Spielmaker. (Somehow that doesn't sound right. What I mean is that Karl likes old engines, not that Karl is old and likes engines.) The Golden Eagle is a medium size Class C engine, .53 cu. in., and although it is an original design by Karl and is not intended to be a replica of any particular antique powerplant, certain features of various old motors seem to have found their way into the design. For example, the lower section of the case looks quite a bit like a Vivell or Madewell, the points are very Orwick-ish, and the engines is side ported and has a rear intake just like the old Ohlssons.

The Golden Eagle features a sand cast crankcase, clear plastic tank, and open points (makes for easy cleaning). To correspond with its name, the engine has a polished brass intake tube and timer advance arm, and the cylinder head is gold anodized. It even comes in its own colourful box similar to the ones used by the old Forsters, Ohlssons, and Cykes. Claimed performance is 7500 rpm with a 13x6 prop.



The Golden Eagle, a .53 cu.in. ignition Engine from Spielmaker Engines.

The Golden Eagle sells for $140.00 plus $4.00 postage and insurance. You can get one direct from Spielmaker Engines, 4690 Burlingame S.W., Wyoming. MI 49509.

"When I was 18, I had to give up models so I could concentrate in college, in order to get into business school, so I could get a good job, so I could take Thursday afternoon off to build models."

THE RECOVERY OF THE MODELS curated by Renato Nicosia

I would like to draw attention to a topic that is often ignored, or at best, under-evaluated, that is the recovery systems of the models that came out of our field of vision and therefore ... "lost"

Some time ago, talking to some friends of SAM, I learned that one of our affiliates he had lost a large number of models, and it struck me both because I know how much effort and effort and patience and it takes time to build one, and then for a kind of deep affection that I feel towards my models, so by identifying with the unfortunate friend I was particularly touched by it.

Furthermore, it is necessary to consider that in many, if not all, Old Timer categories the possibility of seeing a model sucked from an ancestry when it is already very high, with the consequent loss of contact visual with the model itself, it represents a danger always lurking. In these situations, except spore-you say and very lucky cases, the model will never be found again.

What can be done to reduce the possibility of losing a model and at the same time allow us to fly more peaceful and without worries? Well, the solution is not univocal, however it exists, and it is well tested and easy to implement.

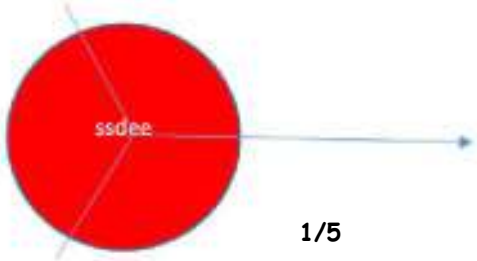
So let's see what tricks we can put in place in order not to lose, or rather to be able to recover and our models.

The oldest method consists in using a compass to have, if nothing else, a certain reference on "Where" the model has disappeared; but it is a method that is not always feasible and in most cases translates, as they say, in looking for a needle in the haystack.

For this reason, the compass, although useful in principle, is to be considered an outdated method karst usable.

There are, however, a series of modern remedies, provided by the use of electronic devices, which prove themselves really useful, efficient and easy to apply.

The first and most dated electronic system, is represented by the use of an amateur radio receiver, to which it picks up the signals sent by a tiny transmitter placed on the model.



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The type of signal emitted is configured as a beep beep repeated indefinitely and emitted on a frequency issa.

With the receiver we can determine a more or less wide angle, the bisector of which represents the direction where is our model.

To form this angle, I put the receiver on my chest, so that my torso can shield the antenna of the radio, then I start to rotate my torso until the beep beep stops, that's a point to keep in mind; by continuing to rotate your torso, a point will come where you will hear the beep beep again.

Here an imaginary angle is formed, if we take its bisector, that is, the line that crosses this angle or portion of a circle, dividing it into two equal parts, that is precisely the direction towards the which is our model.

Repeating this kind of triangulation will come very close to the model itself and in that case the angle it will always be bigger, so big that at some point the radio will play in any direction there we turn.

So, it means that we are really close and if we are not able to identify it on sight it is better to adopt a simple ploy to be able to do yet another triangulation, that is, you have to change the frequency for example if I have a frequency of 140.500 MHz I will have to change it in such a way that the radio will continue to perceive the signal but with some effort, for example by setting a frequency of 140.00 MHz or 139.500, i.e. higher or lower. you will see that you will find a portion of the circle again in which the beep beep is missing; turn around and go in the opposite direction to the sector where the signal is not heard and you will certainly find the model. A little laborious but effective, you also can't go wrong.

The transmitter is supplied by a Dutch gentleman, Pim Ruyter, whose email and number I am attaching telephone (speaks English) at the end of the article. It is an object of less than two square centimeters and weighs between the 4 and 5 gr equipped with an antenna that must remain outside the model, outdoors.

It can be placed anywhere on the model as the reduced weight generally does not change the position of the CG.

It doesn't need to connect to the model's batteries because it uses a micro stylus battery that allows it to run continuously for at least a week.

I recently lost a model towards evening; after a long search, the night had come, so I have had to stop and the next morning I managed, thanks to the use of the radio, to recover the of which he was caught in the branches of a tree.

As for the recipient, they are found on the internet excellent at a cost of 30/40 Euros or less. I have used this system many times and I am always managed to recover my models without problems.

Example of transmitters and portable receiving system.

The one described represents an economic recovery method and very effective in that the signal is perceived also at great distance (well over 10 kilometers) except for one shielding suffered due, for example, to a hill that covers and prevents the signal from reaching the receiver.

Then there is another system, extremely convenient and even more effective, with no possibility of error and that

100% guarantees the recovery of the model, even if a thief wants to take it by taking it and bringing it to his home or if the model had fallen 50 km away. Don't worry, the model can be found, even if it ended up on the other side of the earth! This is the so-called "GPS System"

The system consists of a GPS transmitter with its power supply battery (300 mah) to be placed on our model, and a receiver with a display that can tell us the direction where the model is located, the distance in meters between us and the model, how many satellites are connected etc. etc. This system takes us to the model without the possibility of error!

Also in this case the weight of the transmitter to be put on the model is very low (5/6 gr) and such as not to affect the total weight and position of the CG. The range is extremely wide and the duration of data transmission is several days, continuously.

These systems are significantly more expensive and can be purchased from different manufacturers. There is a French company (Optimaltracking) that has a beautiful system that

can also give the topography of the land where the model is located, and I think it is the most expensive (around 500.00 Euros for the whole system, that is, the transmitter, the receiver and the battery charger)

Attention, this system can cause radio disturbances and, therefore, its compatibility must be verified with the RC system present on the model; apart from this aspect, it is a set of excellent level and great performance.

At the bottom of the article you will find the email address of this operator.

There is also another manufacturer that can provide an excellent GPS system, with a lower price.

Note: (we are around 300.00 Euros for the transmitter, receiver and battery charger unit) case the transmitter, slightly smaller than Optimaltracking, has a very low weight.

Portable GPS transmitter and receiver.

The receiver has a display showing an arrow which indicates the direction where ours is model, does not have the topography of the ground but the indication it is able to provide is extremely He also points out to you precisely how many meters away ours is, as the crow flies model from us.

The producer is Massimo Ursicino's ffelectronic, the son of our late partner. Also of this manufacturer you will find the references at the bottom of the article.

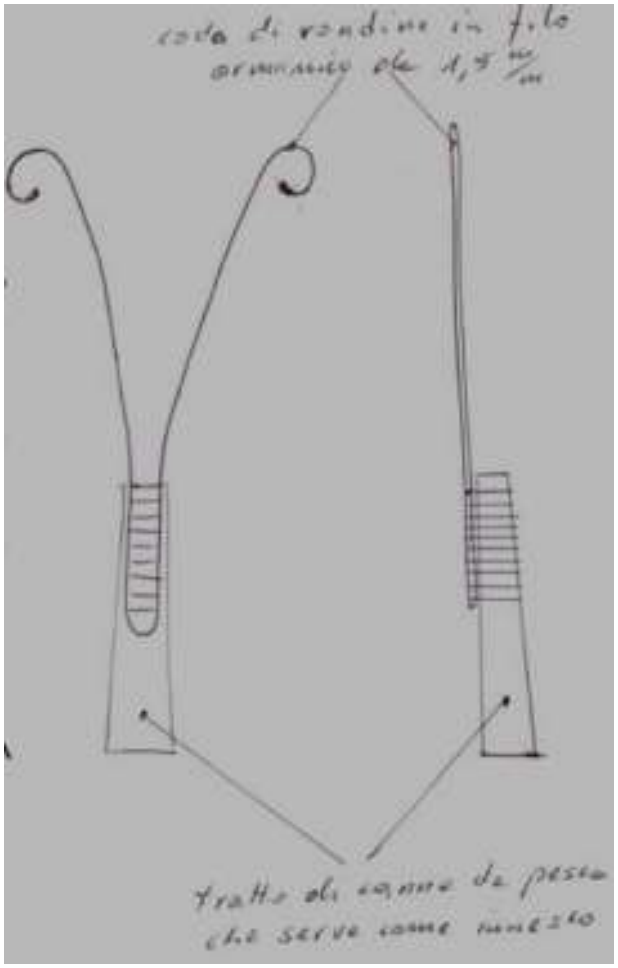
I personally use this system and I have to say that I am fine. You need to turn on the entire system at some time before launching the model, to give time to the receiver to be able to connect with the various satellites that receive the transmitter signal. However, there is no possibility of error, e.g. recovery of the model, in any condition you are in, it is insured.

Portable GPS transmitter and receiver - Ursicino

Additional help for recovery, or at least to reduce the possibility of model loss, can be provided by the presence on board of the model itself of a high intensity strobe light such as to render the model visible even in conditions that would otherwise be very difficult, if not impossible, an example when our model ends up inside a cloud. The strobe light is also accompanied by a battery, all for a truly negligible weight.

Also this device can be purchased from Ursicino and I assure you, it is very useful. It is enough to imagine a model that is now very tall, small and small, which meets an area of haze, here, without the help of strobe light we would no longer be able to identify its trajectory and visibility, the compromised quality would seriously risk making us permanently lose eye contact, at that point the model is practically lost; with stroboscopic instead, we will have a bright dot at regular interval that moves in the sky, that dot indicates the presence of the model and its trajectory it will therefore be relatively easy to be able to bring the model back into our field of vision and bring your flight back safely.

The argument, far from being exhausted, however cannot be dismissed without mentioning some elements minds that always come in handy in case of model recovery. I refer to those objects which is convenient to bring yourself with you when you leave for a recovery, and that help us bring the model home when this is in difficult to reach positions.



First of all, a fishing rod of those used without the reel, a 6m d rod is sufficient length, which offers us the opportunity to extend our grip beyond our bodily limits.

Secondly, it is of great help to have a so-called "dovetail", that is, a whisker in thread harmonic shaped like a dovetail, to be placed on top of the fishing rod, which will help us catch the model gently and bring it back to the ground, for example when it has stopped on a tree in position hardly accessible.

We must not forget the last element without which any recovery attempt will result in a daring and difficult solution:

The calm when you lose a model, the best thing is keep calm, almost indifferent and organize the recovery trip like a happy picnic at the end of which it will be possible to win a nice premy; our beloved model.

I know, it's easier said than done, but that's it!

USEFUL ADDRESSES

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Renato NICOSIA

Dream flight on the slope

Ted Horne with Fillon at Epsom Downs (Photo Peter Michel)

Stunning Stuff

Amazing designs were considered during World war Two. Pictured in 617 Squadron livery is the giant Vickers Type C, complete with red spinners.

A giant by Reg Mitchell was bombed when part-built at the Supermarine works.

The arrival of jet power opened the gates to the V force and Roy Chadwick's mighty Vulcan.

Tony Buttler's book covers this fascinating period.

Famed for his Lancaster, Chadwick died on a test flight. It was discovered that the controls had been reversed!