

270
WESTERN AUSTRALIA



SAM 1993



SAM 84 Queensland

The Australian Thermaleer

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

Issue No.12

July-September 2022



SAM 270 Western Australia Old Timer 1/2A Texaco Winners L to R. 3rd Phil Letchford, 1st Rod McDonald and 2nd Hans van Leeuwen

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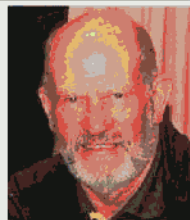
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"The Thermaleer" is the official newsletter of SAM 600 of Australia, Victorian R/C Old Timers Association (SAM600) Inc.

SAM 600 PRESIDENT'S REPORT.
 From Steven Gullock



Hi Peoples

The last 3 months have not been too good for SAM 600 with two of our members passing away.

Brian Dowie, sad and all at his parting it was no surprise as he has been very sick for a long time, but our second death was a great shock as it was Steve Jenkinson who by our standard was a relatively young man and seemed quite well. Our condolences to Brian's and Steve's families.

On a more pleasant note we have been lucky this year by being able to hold all our scheduled comps between Christmas and June this year in good weather with very little carnage and no cancellations.

Unfortunately the September Cohuna contest was cancelled because of lack of members attending due, in most cases, to health problems of family members or away interstate on holidays, myself included, as I am in W.A. visiting my son and his family and I don't have a model to fly and am getting itchy thumbs.

Happy days to all and see you when I get back.

Steve Gullock.
 President.



VALE BRIAN DOWIE



On July 28th, 2022, we received a phone call from Marj Dowie to tell us that her husband Brian Dowie had passed away after a long, hard fought battle with Leukemia.

For the last few years he had many operations and procedures and stints in hospitals that would demoralize most people, but not Brian. He was always positive about whatever subject he was involved in and this probably came about by the fact that early in his life, as a 6 year old youngster, he was hit by a car and spent six months of his young life in hospital recovering.

This showed him early in life that you don't know what tomorrow brings so get off your bottom and do it now. This attitude right through his life drove him to do so many things at once, like starting up and running his own accountancy business, being treasurer for a charity based in Kenya, being treasurer for the M.A.A.A., V.M.A.A. and SAM 600.

When he took over treasurer of SAM600 in the early 2000's we were almost broke because of poor management. Within three years he had us with a healthy bank balance and kept it this way until now. Thanks Brian.

Brian led a very good life, marrying Marj who, incidentally, attended every event with him, bringing up a family and he never drank or smoked.

Farewell Brian, you're in a better place now and you don't have to worry about your clients dodging the ATO.

Brian Laughton.



VALE
STEVE
JENKINSON



SAM 600 CONTEST DIRECTOR'S REPORT.
From Kevin Fryer

Unfortunately our Cohuna September comp and AGM were called off due to lack of competitors through genuine reasons such as family health and vacations.

This comp and AGM has now been rescheduled and will be held at Cohuna on the 22nd and 23rd of October and the October comp for Echuca has been cancelled.

I am sure we would all have been saddened by the passing of two of our well liked members in Brian Dowie and Steve Jenkinson. They will be sorely missed.

We have worked very hard at cleaning out and selling a lot of Brian's aeromodelling things and have managed to raise some money for his wife Marj and also cleared out the garage so Marj can now get her car in.

Well there is nothing much else to report so I'll see you all at Cohuna in late October.

Kevin Fryer, Contest Director.

From SAM 600 of Australia Newsletter #82 October • November 2002

RAMBLINGS, by Don Howie.



Recently took a trip overseas and some of my observations may be of interest to Old Timer flyers here in Oz.

Whilst in Germany I visited the Deutsches Museum in Munich which has a quite amazing display of German model aircraft. German model engines from about 1918 are displayed together with the famous American engines from the thirties and the European diesels from about 1939. German model development is displayed and their history of Radio Control with the Herr Stegmaier model from about 1950 that used pneumatic controls - very advanced at that time. Early German R/C from the late fifties; Grundig, Metz, Telecont, that used tuned filters were also most advanced at that time. Also the development of electric models by Fred Militky.

In England I stayed with David Baker of SAM 1066 and visited Old Warden and Middle Wallop. The cost of old engines at Old Warden was rather out of my reach as it is about three dollars to one pound. Free flight in the UK is very popular and many of the spark engines flown without radio control were British, such as the 6cc Stentor from 1947, and other low power models. I enjoyed seeing many of the old Frog kits that I remember as a boy, from rubber to control line, such as the Radius and Vandiver models. The SAM Champs at Middle Wallop was huge, the weather was very pleasant and I flew a "Tomboy" with an Indian Mills .75, until I got too tied chasing it for considerable distances. It was very pleasing to talk to many famous modellers, such as Vic Smeed and George Fuller, who actually read my AMI column. George said he hopes to come to Australia next year. Phil Smith, the Veron kit designer was interesting, along with Norman Marcus who had some great F/F designs. I must have been lucky in the UK as it did not rain and I actually got sunburnt.

Over to the USA and after a fairly hectic drive from Indianapolis I arrived at a wet Muncie, not quite knowing where I was to stay. I managed to get accommodation at a motel next to the Headquarters Hotel and found that I had Sal Taibi, Larry Jenno and many other top modellers staying at the same motel. Next morning I drove to the MECA Collecto in the centre of town at the Convention Centre; and this was like heaven seeing all the old engines and bits and pieces for sale. Out the back they were running old engines, such as the Motton M5 radial four stroke, which was very quiet when running. The old Spark engines are now very good value in the USA as many of the old modellers have passed away and their collections are for sale. The perfect or as-new engines are expensive; but marked or slightly rough engines are at giveaway prices. The AMA 1,000 acre flying site was amazing with bitumen roads going to the different areas and camping facilities on the site. The weather was a bit windy at times for the F/F flyers, but the highlight was the AMA Museum that I spent days going through, as it was so interesting. They even have a lounge with armchairs with bound folders of all the old US magazines; you get out any magazine you require and can photocopy any article in the copying room. A truly amazing place, the Headquarters, that employs 50 people full time.

**Contest calendar
2022**



SAM 600 Australia
Victorian Old Timers Association. Inc
1 / 33 Manikato drive
Drouin Vic 3818

Contests commence at 9 am, unless otherwise stated.

The 2017 MAAA Rules apply

The CD for all SAM600 events will be nominated on the day of the event

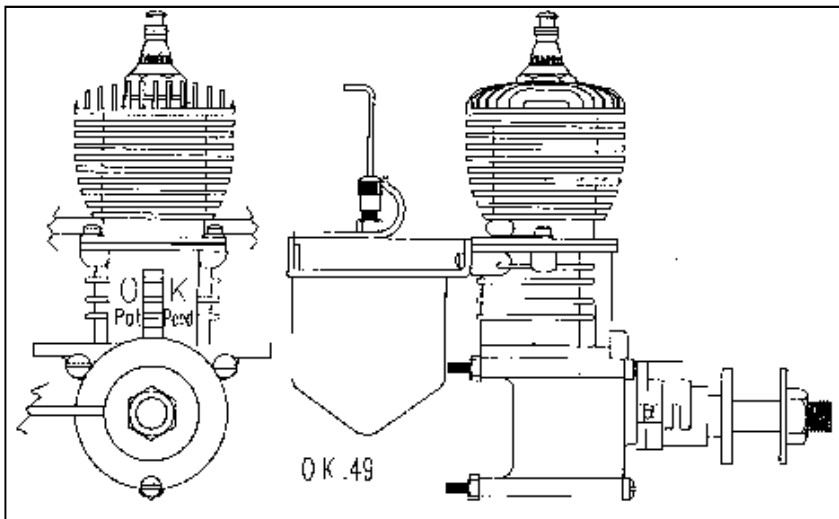
General Meeting Sept Cohuna comp


1/2A Texaco, Duration & Texaco events will have the electric equivalent (except State Champs & Nats)

October ECHUCA	Echuca Tri-State Champs - CANCELLED
October 22 nd -23 rd COHUNA	Saturday: 1/2A Texaco, Duration, Burford. Sunday: 8.30am Annual General Meeting, then Texaco, '38 Antique.
October 21 st -23 rd WEST WYALONG	SAM 1788 COMPETITION ADRIAN BRYANT FIELD, WEST WYALONG Friday 21st at 1.30pm: Electric Old Timer Glider. Saturday 22nd: Burford, followed by Duration. Sunday 23rd: 30-Minute Cabin Scramble followed by 1/2A Texaco, then Texaco.
November 20 th BALLARAT	BALLARAT 1/2A Texaco, Texaco, Duration.



The late Colin Borthwick, from Queensland, Australia, an active member of the original SAM 1788 Chapter in Australia. and a founding member of The Vintagents, SAM 84 Queensland, was inducted into the SAM Int'l Hall of Fame in 2021.






75 YEARS

SCALE OVER WEST WYALONG

ADRIAN BRYANT FIELD
1390 CLEAR RIDGE RD WEST WYALONG




- All types of scale models welcome (RC, CL and FF).
- If it looks sort of scale come fly it (including foam and profile models).
- If you own a pulse jet it's a must to bring it!
- Big function organised for the Saturday Night.
- Camping available on site \$10 per night.
- Contact Roy for catering and to secure your spot.

A field will be allocated for those wanting to fly non scale Free Flight.

5th & 6th NOVEMBER 2022

CONTACT: ROY SUMMERSBY
SMS: 0413 588 720
EMAIL: roy132@optusnet.com.au



Aeromodeller

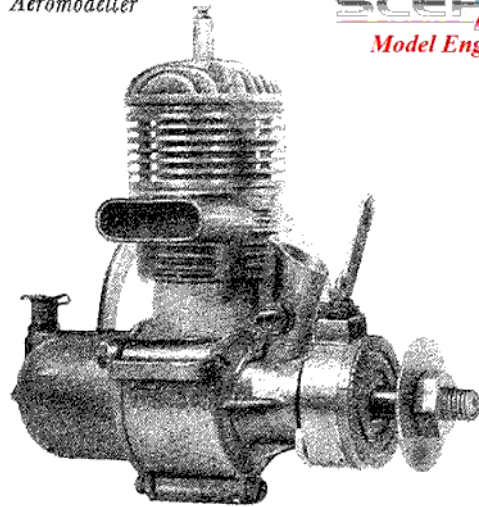
SCEPTRE
FLIGHT
Model Engine Tests

February, 1952

February, 1952

Aeromodeller

E N G I N E



The **FROG "500"**
SPARK IGNITION

PRODUCED to meet the demands of the many diehard petrol/ignition engine fans, the converted Frog 500 is probably the only production engine to make the unusual change from glow to spark.

The petrol version has been available for several months and has already established itself as a favourite for radio control and sport free-flight. Its general construction remains unchanged from the "Red Glow" version, the modification consisting of machining the crankshaft bearing to take the contact breaker, which, incidentally, employs all of the best fool proof features hitherto seen on American products only. Insulated with fibre washers, and located in a fibre lined square, the "fixed" point in the "make and break" may be adjusted with ease, and without any need for dismantling the assembly—a feature which is noticeably lacking in other petrol engines.

With identical porting, it is not surprising that both Glow and Spark ignition 500's reach peak b.h.p. at approximately the same r.p.m., this being 13,200. What is remarkable is the fact that the petrol engine, with its advantage of ignition control, can exceed the glow-plug power at peak by .04 b.h.p., and at the general working figure of 10,000 r.p.m., the petrol engine is superior by .06 b.h.p. No wonder that there should be a demand for such an easy-to-operate and economical power unit.

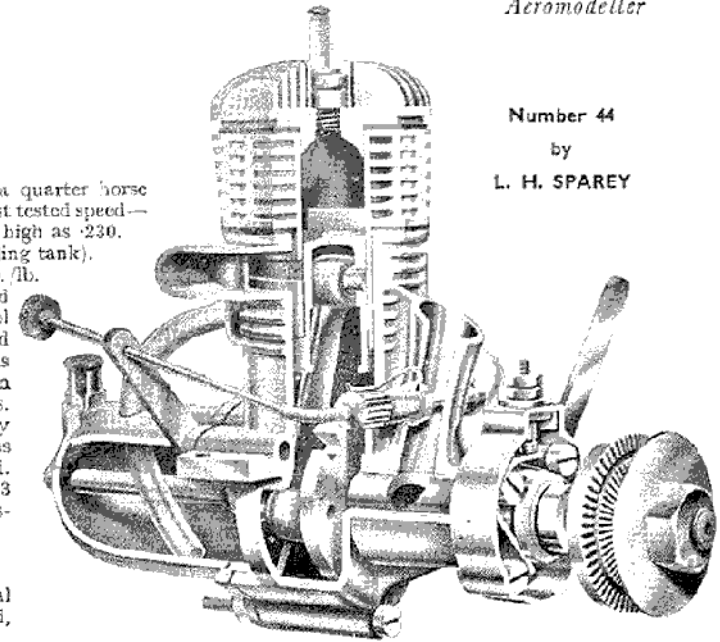
TEST

Engine : FROG "500". 492 c.c. Petrol.
Starting : Starts well at all loadings.
Running : Extremely even running at all speeds. This engine is very flexible, and responds well to spark advance and retard.
B.H.P. : The extremely good output of .420 b.h.p. was obtained at 13,200 r.p.m., with a drop to .240 b.h.p. at 14,350 r.p.m. The engine is remarkable for its high torque at low speeds, as the

graph shows a recording of over a quarter horse power at 5,000 r.p.m. At the lowest tested speed—about 4,000 r.p.m.—b.h.p. was as high as .230. **Checked Weight:** 7.8 ozs. (including tank). **Power/Weight Ratio :** .86 b.h.p./lb. **Remarks :** The flexibility, good power output, and excellent control which this engine shows reminded me that the petrol engine has features which are sadly absent in most diesel and glowplug motors. In particular, the control given by the spark advance and retard was a delight now seldom experienced. The fuel used was composed of 3 parts Pool Petrol and 1 part Castrol XXL.

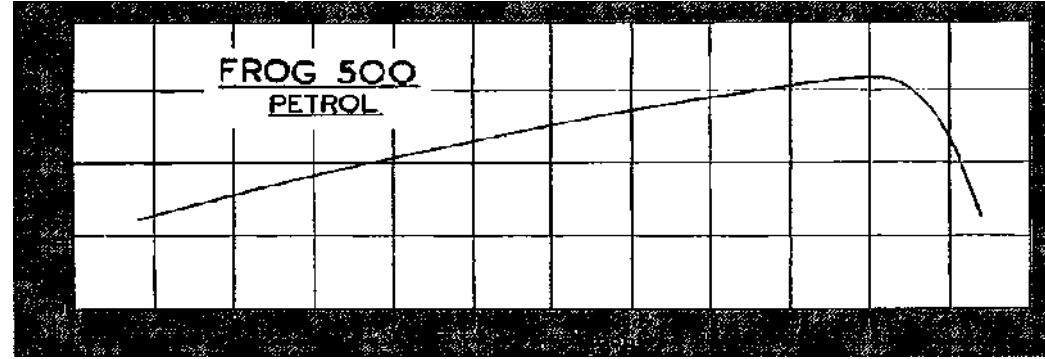
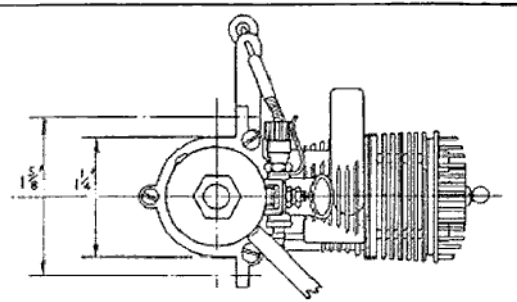
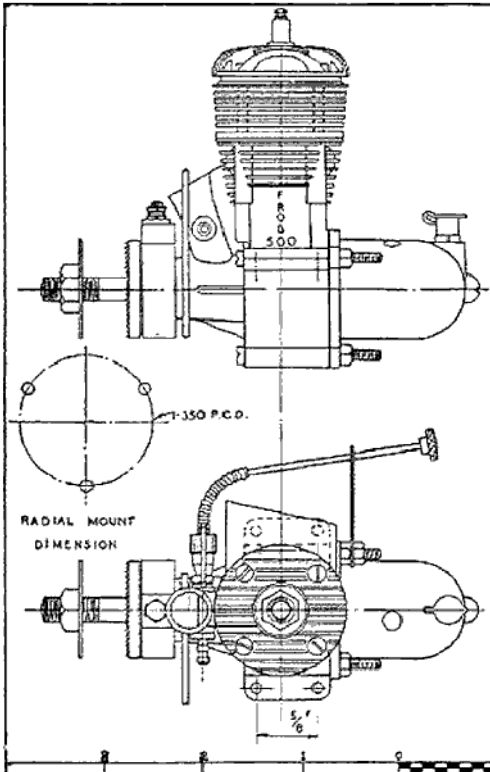
CONSTRUCTION DATA

Manufacturers : International Model Aircraft Ltd., Morden Road, Merton, London, S.W.19.
Retail Price : 85s., including Purchase Tax.
Delivery : Ex stock.
Spares : Ex stock.
Type : Spark-ignition.
Specified Fuel : 3 parts Petrol : 1 part Castrol XXL.
Capacity : 4.92 c.c., .30 cu. in.
Weight : 7.75 ozs. including tank.
Compression Ratio : 8 : 1.
Mounting : Beam or radial, upright or inverted.
Recommended Airscrews : Free Flight : 10 x 6 ins., 11 x 5 ins., 11 x 6 ins. Control line : 9 x 6 ins., 10 x 6 ins.
Flywheel : 2 x 7/8 ins. 5 ozs. weight.
Tank : Detachable, universal mounting.
Bore : .750 in.
Stroke : .680 in.



Number 44
by
L. H. SPAREY

Cylinder : Hardened steel, retained by 4 6-B.A. screws deep spigoted to crankcase. 1 transfer port, 1 exhaust port.
Cylinder Head : Diecast aluminium, retained by 4 screws to cylinder.
Crankcase : Diecast aluminium.
Piston : Meehanite. Deflector type. No rings.
Connecting Rod : Forged hiduminium, R.R.56.
Crankpin Bearing : Plain. Drilled for connecting rod retaining pin.
Crankshaft : Hardened steel, ground and honed.
Main Bearing : Phosphor bronze honed.
Little End Bearing : Plain.
Plug : 1/4-in. K.L.G., "Mini 2".
Special Features : Flexibility, with high power output. All parts machined to fine limits to ensure interchangeability.



1935-6

The early K-G (Kovel-Grant) featured complex construction, severely simplified lines. Long flights resulted from large fuel allotments of one-eighth to one-quarter ounce per pound of weight; heavy K-Gs thus took off with nearly full tanks.



1937

Michael Roll's twelve-foot-span model typified the big-plane trend. Light structure and enormous wing area permitted use of small "Baby Cyclone" engine for maximum engine duration under the still-liberal fuel allotments.



1938

Designs varied greatly by 1938. Berkeley's "Buccaneer," a popular kit, was more realistic, smaller, and faster than earlier types. The added speed revealed design errors not noticed in the slower models.



1939

Goldberg's "Zipper," a Comet kit, revolutionized gas model design with pylon mount, short nose moment, cleaner aerodynamic lines. Power loadings, wing loadings, and shorter engine runs were imposed.



1940

Typical of many designs which adapted "Zipper" features was Struck's "New Ruler," built in close conformance to rules. More care given to basic force arrangement provided stability under fast, limited engine runs.



1941-2

Elimination of cross section rule brought about the "Pencil Bomber" type. Here all realism vanished; the errors in basic design, aggravated by high speeds, caused numerous crashes. Retractable one-wheel landing gear and folding propellers were widely used.



From 1946 Air Trails Annual

EVER since Maxwell Bassett turned up with the first gas model ever entered at a Nationals (Roosevelt Field, N.Y. 1933) and rode rough-shod over the rubber-powered models. The rules governing model competition have been constantly refined. Looking back at the significant changes, it is interesting to note that the trend - and this trend is still developing - has been toward more power, more heavily loaded, smaller models. Out-of-sight fights were so common-place that, almost yearly, the rules decreed that, for gas, shorter and shorter motor runs be allowed, that more heavily loaded models be flown.

At first, the gassies were launched with a full tank of gas and they climbed until the prop stopped - which was generally thousands of feet high in the sky. Then it was decided to allow one-quarter ounce of gas for each pound of weight, which was plenty when you consider that a light model weighed four pounds, and a healthy one, seven. That was for models spanning something like eight to ten feet, which was then the vogue. Despite their gross weight, their wing loadings really were lighter than those in use today.

Another year and the gas ration was cut to 1/8 ounce. Then came the 30-second engine run, then the 20, and finally the 15 second engine run. Wing loading restrictions had been put in force; at first 8 ounces per square foot and, finally, what we have today, seven ounces per 100 sq. inches of wing area. The funny thing is that the idea to increase wing loadings in order to reduce out-of-sight losses really back-fired. The smaller, more heavily loaded models with the same power as the big jallopies started to climb straight up to tremendous heights, from which they too easily soared out of sight.

Eventually, power loading rules were imposed. For every cubic inch engine displacement, a model had to weigh 60 ounces. Later, this was altered to 80 ounces. Thus, for a .60 engine, the required weight was 48 ounces. New engines, like the Rocket, which has only .46 inches displacement but the power of a .60, threaten to make the rules even more



1943-5
Current AMA regulations, after
using the minimum open section
rule and requiring higher wing
and power loadings, have re-
sulted in a refinement of design
with principal forces directed at
that the high speed required
wing is no longer required for
winning performance.

ineffective than they already have been proved to be. Until power loadings go up to something like 120 ounces or more per cubic-inch displacement we shall have frequent crack-ups due to complete lack of control, plus high percentage of out-of-sight flights.

Though the more-power trend affected both rubber and gas, both fields of design took separate courses. In gas, the perpetual problem was how to handle the excessive power for the size airplanes being flown; in rubber, the problem, since there can be no limited motor run, was how to extend the motor run to get higher climb. Carl Goldberg's Zipper, designed for Comet, revolutionized gas model design in 1939. By placing the wing high on a pylon and using a lifting-type tail, Carl was able to control the tendency to stall under power well enough to get a straight-up climb. Pylon models dominated things for years and are still quite popular.

One virtue of the Zipper idea, was that the pylon which supported the wing had a good effect on the power-turn characteristics of the model. The same feature applied to home designs offset some unfortunate but mistaken practices, namely, the idea that by placing heavy objects low in the airplane a great amount of "pendulum stability" was obtained. It has since been proved that it is important to have a fairly high centre of gravity with a deep-bellied fuselage. This combination gives safe turns with a powerful motor, eliminating the need for the pylon. This is why the present trend is toward the cabin model: the one with the wing on top of the fuselage, and the shoulder wing affair. Probably the worst thing that ever happened to gas modelling was when the rules eliminated the requirements for a minimum fuselage cross section of Length

Squared, divided by 100. The result was the "pencil bomber," an airplane with a stick-like fuselage. With its wing mounted high on a pylon, and with great forward and climbing speed due to its very small resistance, this model required a lifting tail with an area equal to half that of the wing! That rule, thank goodness, was rescinded in 1944.

Until 1938 there was no wing loading rule for rubber-powered models. In 1938 a wing loading of 60 ounces per square foot was imposed. This had to be increased to 80 ounces in 1939. Like gas, the net result was to substitute for the old-fashioned "floater," or ultra light weight model, a more efficient job that, despite heavier loadings, flew out of sight just as easily as its more fragile ancestors. Increased motor runs were achieved, not by gearing and multiple motors, as one might expect, but by rubber tensioner devices which, by preventing the motor from completely unwinding, made it possible to use over-length motors. Thus, a four-foot rope of rubber could be installed in a 30-inch-long fuselage without sagging.

Though streamlining never really took in either gas or rubber, some concessions have been made in the interests of better glide. On rubber, free wheeling props came in, followed quickly by the "folders," themselves made possible by rubber tensioning devices and propeller stops which always stopped the prop in the same position, after which the wind blew back the hinged blades. Retractable, single-wheel landing gears have become fairly popular. Usually, a rubber band snaps back the landing gear into a slot in the fuselage when the weight of the model becomes airborne. Serious streamlining for gas models seems to have been half-hearted, stopping at an occasional folding landing gear, fairing stringers on a fuselage, the use of cowls around the engine.

The editors believe that, for rubber, a box fuselage is adequate, but that folding landing gears help considerably. Folding props are a must. For gas, boxes are adequate, but it is recommended that they be faired to a cross section that approaches an oval. Engines should be cowled, at least underneath and on the sides. Landing gears should be short as possible and yet protect the propeller. A folding landing gear helps. A folding prop for gas is very dangerous and should not be used.



THE SECRET OF THE MODEL INDUSTRY

For more than two years, and the source of many innovations that are being used in the future of the model airplane industry, the **Comet D-40** is now available. Designed by Don Dowd, internationally known for his masterful design, the **Comet D-40** has many improvements in design and construction which before unobtainable to the modeler. **Comet D-40** is a high speed, high performance model airplane. It is the most advanced model airplane ever designed and built. The **Comet D-40** is a model airplane in a small package. **Comet D-40** is the most advanced model airplane in the world.

See your dealer for details, specifications and prices. Do not write direct.

Comet & Smith Manufacturing Co.
1224 BUNBURY ROAD, BUNBURY, CALIFORNIA

VINTAGE GLIDERS IN AUSTRALIA

By Don Howie.

This event, started about 1990 by SAM 1788 in NSW, (*but its correct name is Oldtimer Glider - Editor*) is for published designs up to the end of 1950. They can be enlarged as many Free Flight designs in the 1940's were less than 5 feet span. The first example shown, "Ivory Gull 2" came from January 1943, Aero Modeller and designed by Bob Gosling in the UK at 50 inch span. During WW2 power models could not be flown in the UK, so many people in the country areas, not subject to bombing by the Germans, flew F/F gliders.



Peter Leaney with the Ivory Gull

The model by Peter Leaney, shown at Willunga Vintage Modellers Club is 100 inch span, the design was the most popular F/F glider plan in the 1940's and 50's. The gliders use rudder and elevator control, take normal size servos, some of mine are about 30 years old, such as the JR 501 and 502 models, still 100% reliable, due to no vibration etc.

In 1946 at Eaton Bray in the UK, the first private model flying field owned by DA Russell, owner of Aero Modeller Magazine, the French modellers were invited to attend. M Fillons had the Champion model shown and it won the glider event.

The design at 113 1/2 inches was published in the March/April 1947 Aero Modeller.

The model shown here was built by Brian Laughton (Vic) and flown at the SAM 1788 Champs, Easter 2014, also voted the best model at this event.



Champion built by Brian Laughton (Vic)

Next model shown is the 10 feet span "Sunspot" designed by Roy Yeasbsley in the UK and published in February, 1948 Aero Modeller.

The F/F fight times were 5 minutes and if flown in any wind would travel a considerable distance, so larger models could be seen further away. The model shown built by Colin Collyer, who is the top vintage glider flyer in Victoria.



Colin Collyer with the Sunspot

Max Newcombe (SA) flew his "Thunder King" 11 feet 4 inch span glider at the Canowindra SAM Champs, NSW in 2012 and placed 3rd out of 22 entries. This model in Australia was made popular by the late Leo O'Reilly who flew one back in 1950/51. The model was designed by Peter Gilbert in the UK and was the 1940 British Nats winner. The design was published in Model Plans Annual 1950, Leo first built the model from plans in this magazine.

The model shown flying is Ivan Stacey's "Super Sunbug" at 10 foot span (Original size) and the fuselage has been



Max Newcombe with the Thunder King

rebuilt many times. The design or development by Roy Yeasbsley in 1948 resulted in a 56 minute 53 seconds flight to win the Flight Cup in 1948. This British design was published in Model Planes Annual 1949. Ivan is currently leading the glider event this year.



Super Sunbug

The Vintage Glider (*Oldtimer Glider*) contest is simple, four rounds with three rounds to count with max time of six minutes. Model are winch launched with no zooms and we do not have spot landings which can damage these large light models. A simple but great event.

From

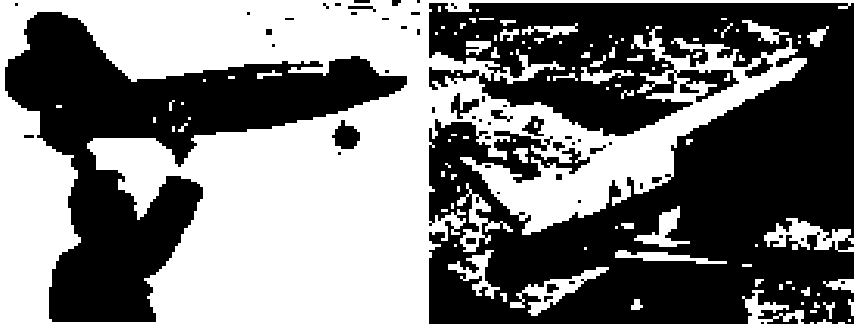
Model Aerosport SA Inc. Newsletter August 2015 Edition

TAIL FIRST TIPS



By ED YULKE

A model-building engineer at Republic gives the low-down on this novel type of airplane.



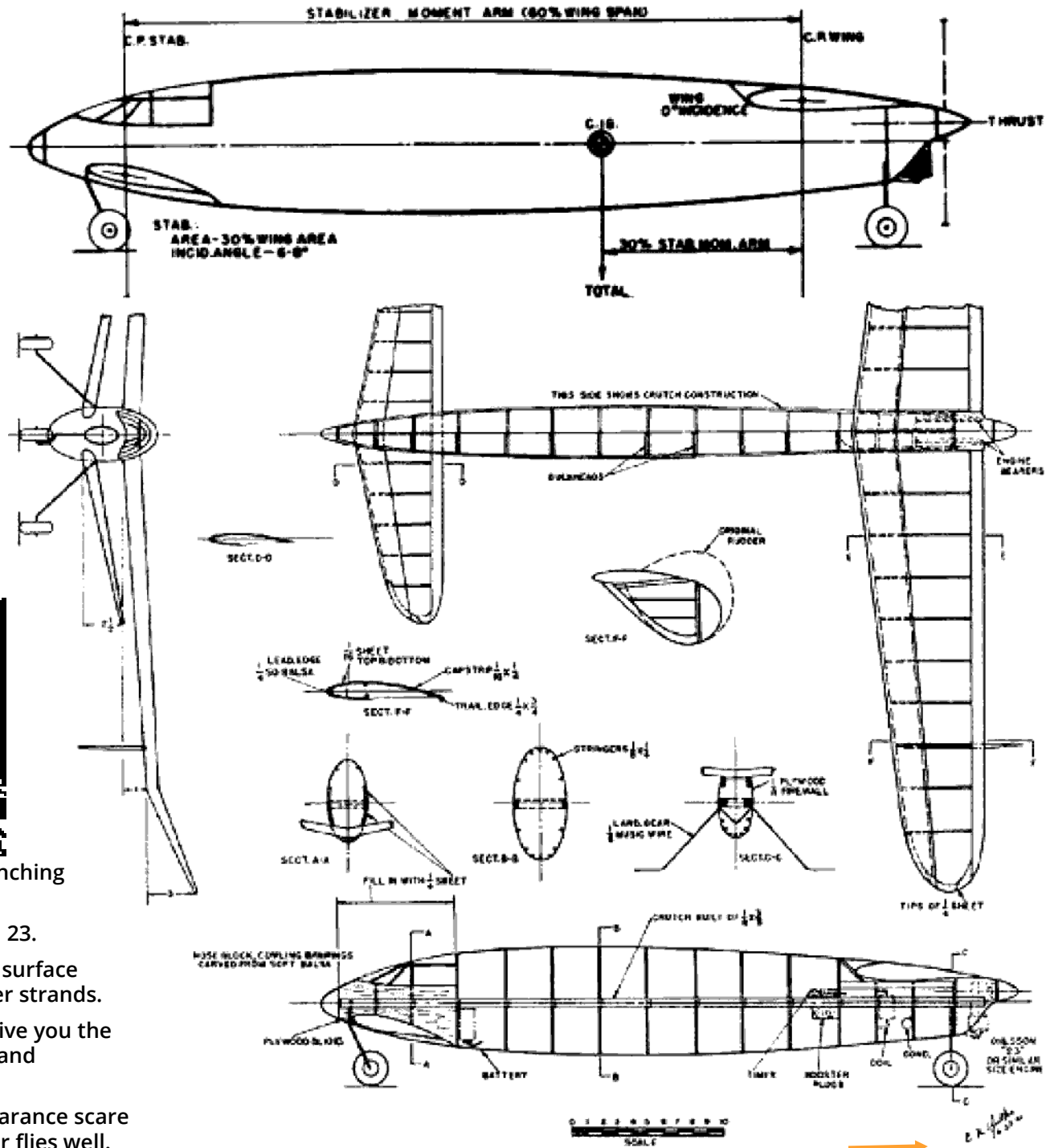
The author shows the launching technique.

Power plant is an Ohlsson 23.

Vulnerable forward flying surface should be held with rubber strands.

The drawings above will give you the general idea of its design and construction.

Don't let its unusual appearance scare you off. Yulke's tail-fister flies well.



TAIL FIRST TIPS By ED YULKE

A model-building engineer at Republic gives the low-down on this novel type of airplane.

FROM the accompanying sketch it can be clearly seen that the model used for experiments by the author differs little in basic arrangement from the type that was prevalent in the days when Cecil Paoli and Armour Selly were setting records with models of spruce construction and powered with rubber motors cut from discarded inner tubes. The component parts of the old twin-pusher type of model were so displaced that the centre of gravity was approximately one third of the, wing-to-stabilizer moment arm, thus necessitating an incidence angle of 4 to 8 degrees in the stabilizer, while the wing remained flat on the A frame. This type of model was almost universal for a number of years, but practically disappeared with the advent of gas-powered models.

From time to time pictures have appeared in various publications of canard-type models, but the technical data that accompanied these pictures indicated that each modeller had his own idea regarding the proper location of the C.G.

Faced with this wide variety of opinions and performance reports, it occurred to us that with patience and a bit of tenacity, an experimental model might result in some basic data that would perhaps eliminate the basic fault of most models of this type, that is, the difference in adjustment necessary in powered flight from that of the glide.

With the fact in mind that this type of model provides almost ideal anti-stall characteristics in that the stabilizer, being set at a higher angle of incidence than the wing, would stall before the wing would and thus reduce the amplitude of the stall and its subsequent dive to recover flying speed, a pencil was put to work.

Without quite realizing what horror was being perpetrated, a rough layout of a B Class canard was appearing on the paper with a fuselage that looked somewhat akin to a fish. The moment from wing to stabilizer was about 50 percent of the 8.1 aspect ratio wing that had an area of 410 square inches and a span of 58 inches. The stabilizer area chosen for the first tests had an area of 25 percent of the wing area. These figures, although contrary to general model design practice, were chosen simply as a starting point from which to vary the stabilizer area, moment arm, and C.G. location. Thus started a period of "build it and test it" and "change it and test it" that lasted for about five months,

with the usual number of "unlucky" flights.

In gliding the original model, the stabilizer angle was found to be 9-1/2 degrees, which was thought to be excessive due to the drag created at that angle, and a note was made to increase the area to 30 percent of the wing area. On the first power flight with the Ohlsson "23" at about half power, the model started climbing at 45 degrees, and the author's heart climbed at 90 degrees, up as far as the wisdom teeth.

The timer (on the model) cut the engine at 35 seconds, and the model seemed to float out of the climb into the glide which developed into a tendency to mush and stall slightly. This was due primarily to the C.G. being too far aft at 26 percent of the stabilizer moment arm. Thus it seemed plausible that the C.G. should be moved forward, along with the increase in stabilizer area. While these notes were being made, a dull crash was heard from the vicinity of a small tree -- and the first rework job was started.

Subsequent tests were made with the C.G. at 30 percent, 35 percent and 40 percent of the stabilizer moment arm, and the stabilizer was changed to 30 percent of the wing area, and later to 33 percent.

During flights testing various combinations of the above figures, best results were obtained by using a stabilizer area of 30 percent of the wing area and a C.G. location of 30 percent of the moment arm. With the C.G. forward of 30 percent, the model had a fast glide that could not be corrected without increasing the angle of incidence of the stabilizer so much that the model again had the tendency to mush.

It was also noticed during these tests that the model had a tendency to be inconsistent in so far as longitudinal stability was concerned. This tendency was attributed to the short moment arm from wing to stabilizer, and it was decided to increase this to 60 percent instead of the original 50 percent. Again the model was laid on the bench for "slight revision" -- the fuselage being cut in half. The two pieces were jugged the required distance apart and structure spliced in to make the fuselage whole again. Now, the longitudinal stability leaves nothing to be desired.

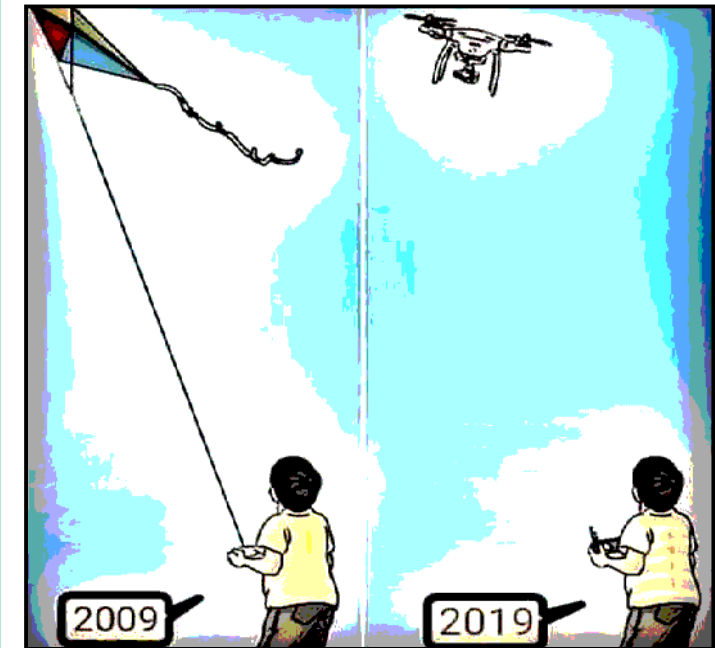
Rudder area on this model was a problem from the start, due to the short distance from the C.G. to the centre of pressure of the rudders. The original area used was 18 percent and, since the directional stability seemed O. K., it was left as originally built until the other data was collected. The last change in the model was the reduction of

rudder area from 18 percent to 10 percent, but with the entire area below the wing instead of as shown dotted in the three-view drawing. Any area above the wing, to be effective, would have to be displaced so that it resulted in high, narrow chord rudders.

Throughout all the tests the gross weight of the model was kept at 30 ounces.. This was done so that a direct comparison could be made when the other items were changed. While 30 ounces may seem at first to be slightly heavy for an Ohlsson "23," actually, in its final form as shown in the balance diagram, the stabilizer was carrying 30 percent of weight or 9 ounces, while the wing supported the remaining 21 ounces. Thus it can be seen that if a canard is designed for an 8-ounce wing loading, it actually flies at less. This is permissible at the date of this writing, since the AMA regulations stipulate that a stabilizer is not considered as part of the supporting surface unless its area is more than 50 percent the main wing area. While this is a definite advantage in model competition, as soon as these models become popular again, new rulings will have to be made regarding them.

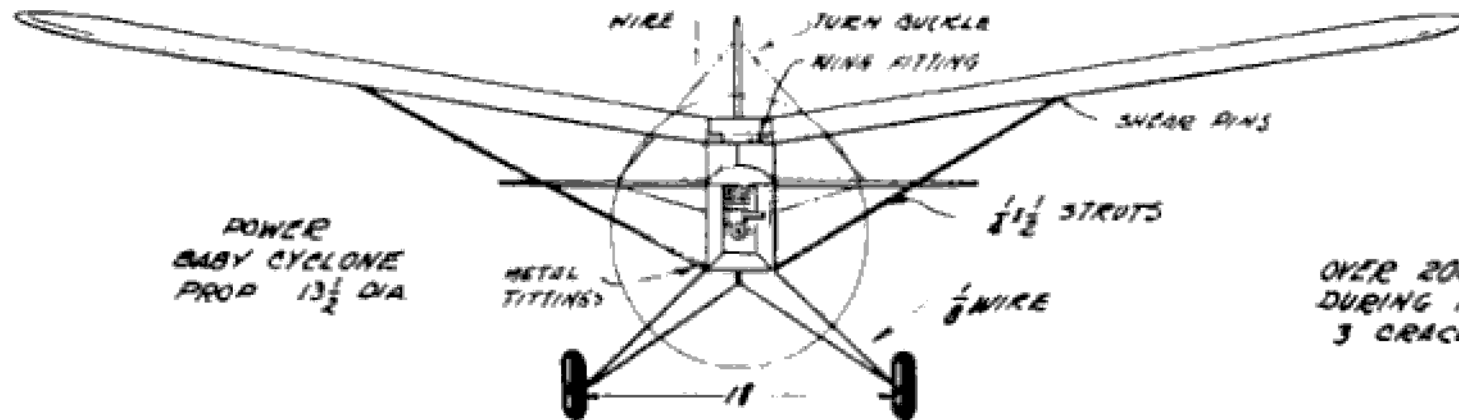
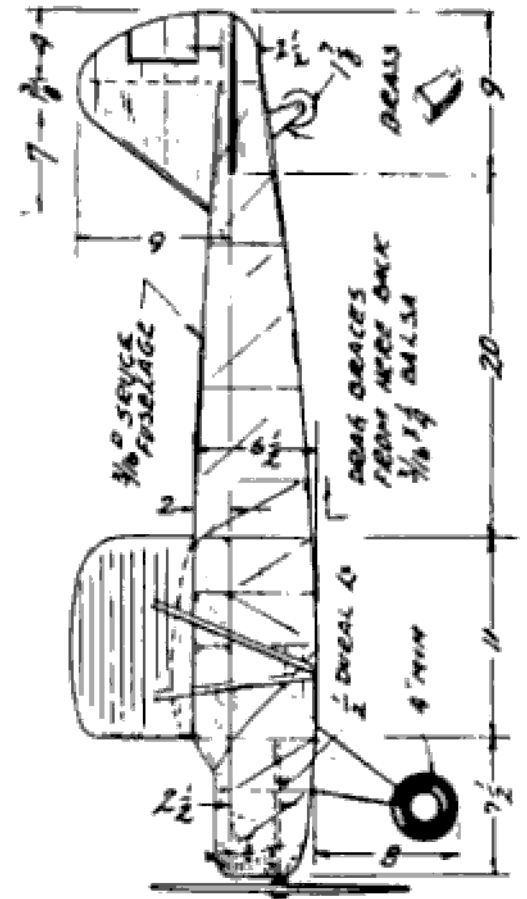
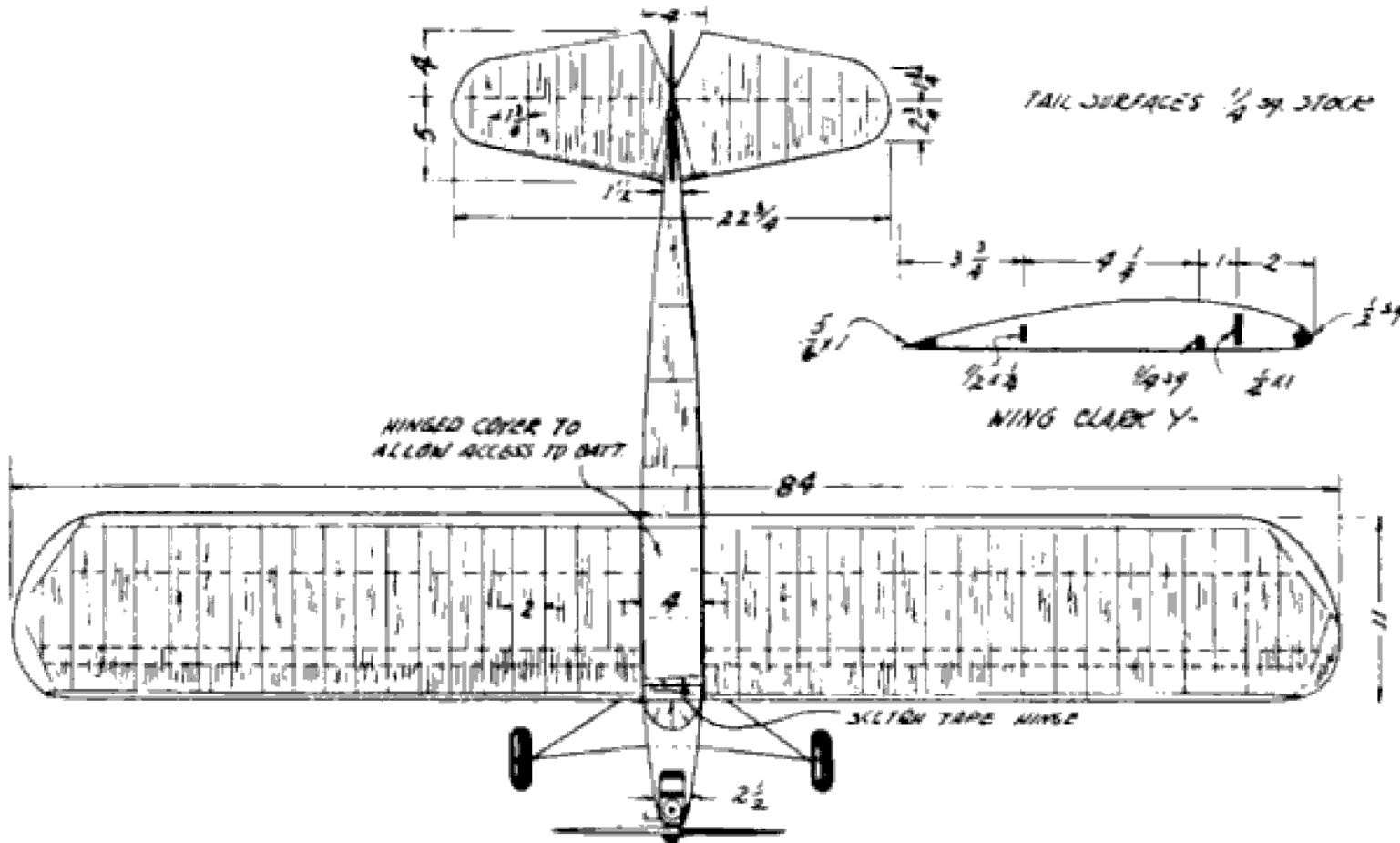
Since canards are not very numerous at present, the author would like to hear from anyone building this type of model. Write in care of this magazine.

*Scanned From January 1942
Air Trails*





Tomboy Day at The Namadgi Club, A.C.T. The Namadgi Club has a great, scenically attractive site but has a few hazards when it comes to flying there.



J. Paic
1938

"OLE RELIABLE"
BEST TIME 87m 40s
DESIGNED BY
CHAS. T. MARCY
SYRACUSE N. Y.

OVER 200 FLIGHTS
DURING 1 1/2 YEARS
3 CRACK-UPS



**DURATION
TIMES**

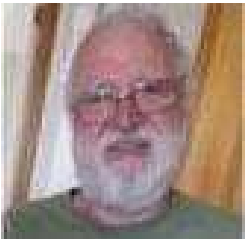
Duration Times is the Official Bulletin of SAM 1788
SOCIETY of ANTIQUE MODELLERS of AUSTRALIA Inc.
 SAM 1788 EXECUTIVE 2022-2023

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SAM 1788 PRESIDENT'S REPORT.
 From Peter Scott.



Greetings flyers. We held the this year's Coota Cup at the AB Flying Field, West Wyalong as, several days before the event, we were informed by the custodian of the NSW State Flying Field at Cootamundra that the flying field was water-logged due to overnight rain. There was more rain forecast. There had been rumours passed around previous to this that the contest was cancelled due to flooding. This was false, the Coota Field was fine up until this point. So, don't listen to rumours, if in doubt phone me or Condo - no one else.

The Coota Cup went off well, read the article in this issue.

We had a committee meeting at West Wyalong, to settle issues and set the format for next Easter's SAM Champs. The 2023 SAM Champs will be held over the Easter week as per usual at the AB Field, West Wyalong, but will start one day earlier and finish on Easter Sunday. The major trophies, including Top Gun, will be presented at the BBQ Dinner at the farm house as per previous year. Event trophies will be given out each day.

There has been a call by some to drop 2cc, Standard Duration and Control Line events. This was not passed, so all events will be run. 2cc and Duration will be run on the first two days. Control Line will be on the first day.

One of the bones of contention with Standard Duration is the constant problem of getting the revs correct. Please read and understand the rules - i.e.: not as you would like to interpret them, but as they are written. All engines are to be checked with the engines leaned fully out to max revs with model held vertically - Not the flier richening the mixture to get the revs down. All models equipped with a carburetor should have the throttle against the fully open stop, fully leaned out so that there is NO chance of adjustment by the transmitter.

I have organised to borrow an audio tachometer so that we can also check revs at launch.

You have been told, don't get uptight with the CD if you don't comply.

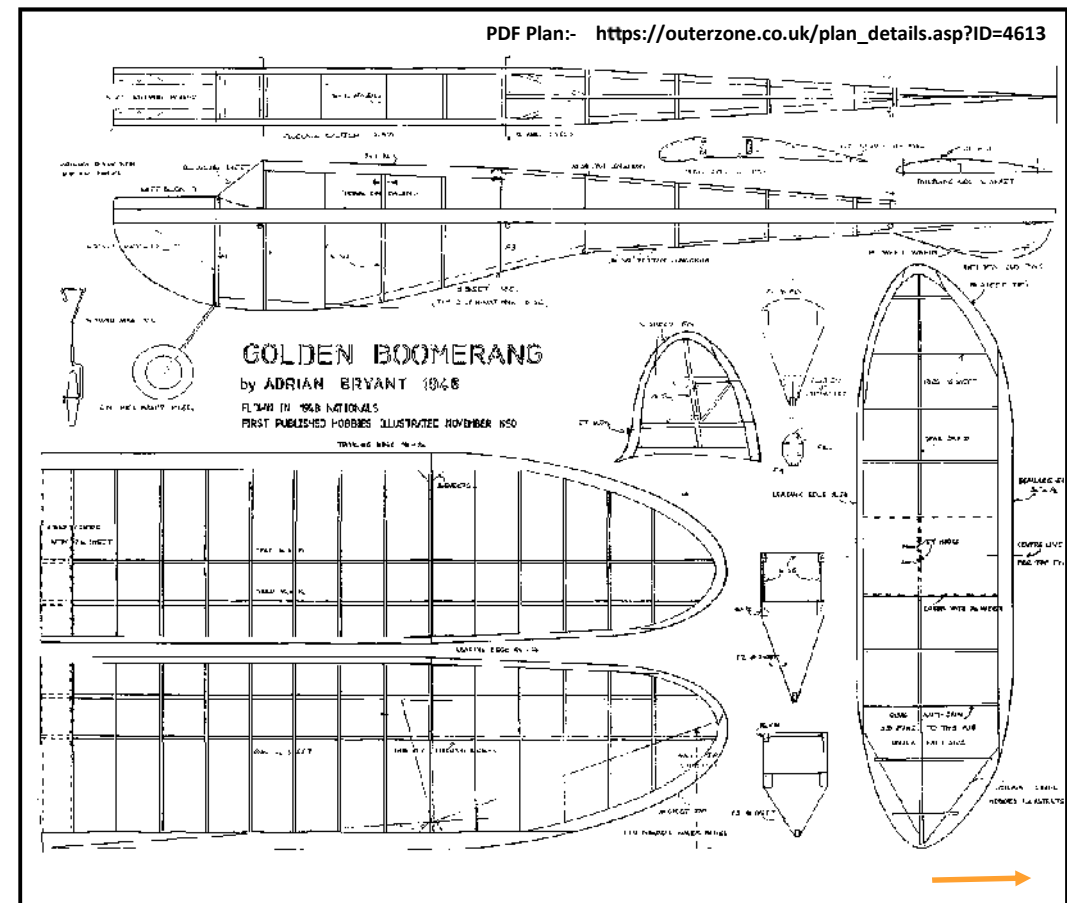
Our next event is at West Wyalong, 21-23 October, 2022, Electric Old Timer Glider on the Friday afternoon; Burford, '38Antique and Duration on Saturday; Scramble, 1/2A Texaco and Texaco on Sunday.

Peter Scott.
 President.

Stop Press!!

Hunter Valley Championships: - The first weekend in March next year is the Hunter Valley Champs. There will be SAM Old Timer events. We run them, HV Champs supply the trophies. Events are yet to be decided by the Committee but will include SAM 1788 Electric Old Timer Glider.

Cowra Oily Hand: - Andy would like a Golden Boomerang model event, powered by Burford diesel. One fly climb and glide - last one down, the winner. Kits available from Bill East. Should be good fun.



About this Plan

Golden Boomerang (Bryant Boomerang).
Free flight power competition model.

Quote: "Adrian Bryant's Golden Boomerang was flown in the Australian Nationals in 1948, and published in Hobbies Illustrated, November 1950. It was reprinted in Aeromodelling Digest, 1990, which also carries the story of the design (inspired by the Rocketeer, it was first flown by a Frog 175 sparkie, then an ED 2cc). The name comes from the original model's colour and also that a lot of time was spent looking for it in the paddocks - this was before DTs.... The original model was finally lost at a contest, flying OOS and never recovered. Although no match for models such as the Stomper which appeared a few years later, it nevertheless was built by many modellers had good contest success in the day, and latterly in nostalgia events. It was the subject of a one-design fun fly at one of the annual Muswellbrook Veteran's Gatherings."

Supplementary file notes:

Alternative print of the plan (not full size) - this is the original 11 x 8 in magazine page as published in 1950. The later plan is a very close reproduction, just giving alternate layout of wingtip balsa components.

Datafile:
(oz4613)
Golden Boomerang
by **Adrian Bryant**
from **Hobbies Illustrated**
November 1950
46in span
IC F/F Cabin
clean :)
all formers complete :)
Submitted: 15/07/2013
Filesize: 397KB
Format: • PDFbitmap
Credit*: GeorgeCar

a spare day should earlier events need to be rescheduled because of weather. The top Gun trophy will now be the last trophy presented at the Sunday night's Presentation Dinner.

The BBQ and AGM will be again be combined and held on Easter Saturday night, more details will be forthcoming when venues and caterers are finalized.

There are only two Competitions left in 2022 which will be the last held using the existing MAAA Old Timer Rules.

The New MAAA Old Timer Rules take effect on 1/1/23. Check MAAA site for your copy. https://maaa.asn.au/images/pdfs/Australian-Rules-S5-Old-Timer-Rules-2022_Final.pdf

The Next 2022 SAM 1788 Event will be at the Adrian Bryant Field, West Wyalong on October 21st /23rd, starting with 1788 Electric Glider on Friday 21st at 1.30pm.

The final 2022 SAM 1788 Event is the Golden West Old Timer Weekend at Parkes, November 12th/13th. Due to a year-long road closure of the road leading from Parkes to the Parkes Flying field, the following is recommended for those coming from the south (West Wyalong,, Forbes, etc.). They are advised to take the back route to the field, I will publish the route closer to the date of the contest. It will save you about 25km if towing a caravan to the field. The detour through Forbes is bitumen all the way to field. The Detour through Parkes has about 5km dirt, with the usual associated pot holes.



SAM 1788 SECRETARY'S REPORT.
From Peter (Condo) Smith.

G'day All,

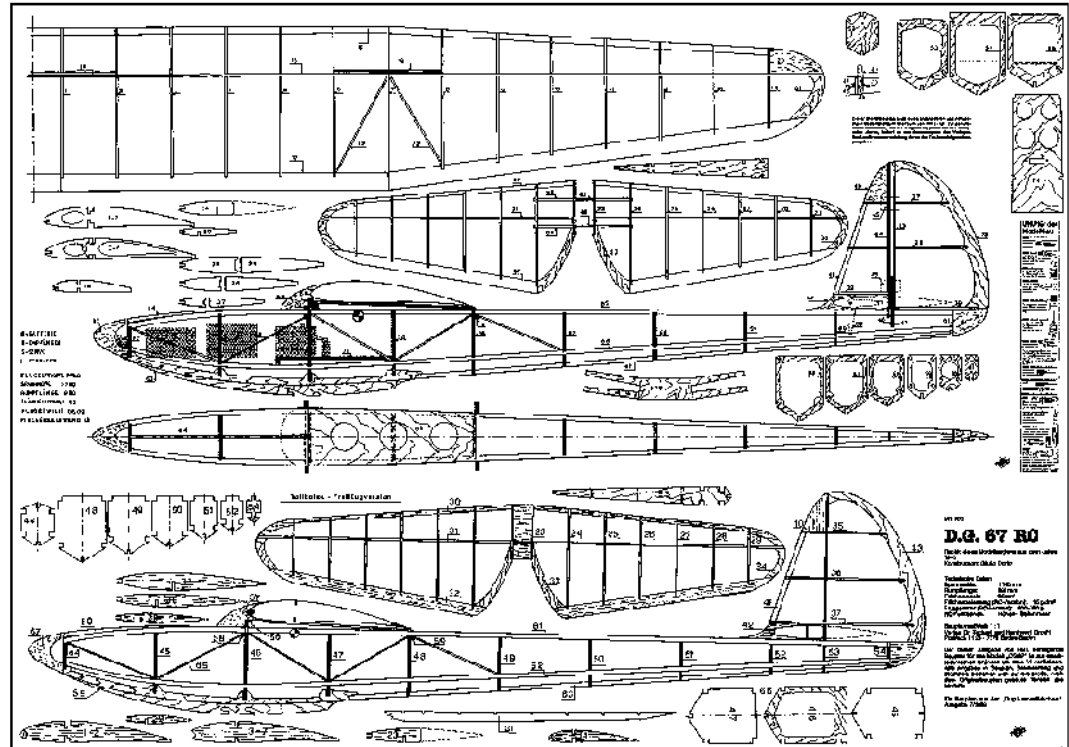
The Coota cup was moved to The Adrian Bryant field at West Wyalong due to the unavailability of the Coota State Field, due to water logging.

The weekend went well with no major weather dramas. The first SAM 1788 Old Timer Electric glider comp went well, with 12 gliders taking part.

The Program for the upcoming 2023 SAM 1788 CHAMPS competition at the Adrian Bryant Field, West Wyalong, has been changed to better reflect the importance of the Top Gun Trophy.

It is the committee's view that the Top Gun Trophy is the foremost trophy at the Champs. Historically this trophy was decided by the usually poorly attended events on Easter Monday, and the trophy presented with a usually underwhelming audience in attendance.

To rectify this, the Easter Monday's events, 2cc and Standard Duration have been moved to earlier in the week. Monday will now be a lay day for fun flying and or



SAM1788 Competition Calendar for 2022

Oct 21-23	West Wyalong Oldtimer - West Wyalong Events: Friday: 1.30pm SAM 1788 Electric Oldtimer Glider Saturday: Burford, Duration Sunday: 1/2A Texaco, Texaco, 30min Cabin Scramble Contact Person: Peter Scott 02 9624 1262 Peter (Condo) Smith 0432 452 879
Nov 12-13	Golden West Old Timer Weekend - Parkes Events: Saturday: 2cc Duration 2/3, Burford 3/4, Duration 3/4 Sunday: 1/2A Texaco 3/4, Texaco 3/4, 30min Cabin Scramble. Contact Person: Peter (Condo) Smith 0423 452 879



From Peter (Condo) Smith,

G'day, This is my model for the SAM 1788 Electric Old Timer Glider event. It's called an Albatross enlarged to 2.9 metres. All up weight will end up at around 3lb 12oz as explained in my video on my Facebook page.

I haven't flown it yet. However I am going to use a 3536 Turnigy motor, on 3 1800mah cells and 11x8 prop. The motor spins the prop at 9200rpm and is drawing 40 amps. That should pull a 4lb glider up to 200m in 30 seconds.

See my FB page: <https://fb.watch/esFJwqqg5o/> Condo.

COOTA CUP OLD TIMER WEEKEND

2nd to 4th SEPTEMBER, 2022.

Adrian Bryant Field, West Wyalong.

Report from Peter Scott Photos from Karen Paton and Peter (Condo) Smith.

This was held at West Wyalong due to water laying over the State field at Cootamundra.

The first event was on Friday 2nd in the afternoon to give people time to arrive. It was our first attempt at electric launched gliders. We had a good turn-up, stiff cool breeze, facilities and field in good shape. I think everyone agreed that things went very well indeed. No one missed the wait for a winch while lines were untangled! I was surprised how many seemed to have problems with the height limiter, being able to hear the beeps for the settings or not knowing if they were getting all the height, this included some who have used these things before! I had no trouble and was happy with the height my old Dragon got to, certainly higher than on the winch. John Quigley won the event, no great surprise there. I came second, that was a surprise, and George Bishop third.

On Saturday, our first event was Burford. Weather was cool and breezy. Nine flew with four making the fly-off, which was won by Peter van de Waterbeemd with his Ollie. Second, Jim Rae with his fast-climbing Amazoom and Condo third with a Dream Weaver. It was nice to see Peter van de Waterbeemd's son John flying one of his father's models - another Ollie. With youth (relatively) and his dad's help, he could easily be the man to beat in the future.

Next event, Nostalgia, had only six entries. When you consider that one could easily fly a Burford model in this class, it's surprising that more people don't fly this contest. I flew Bruce Knight's Dream Weaver to third place. Paul Farthing made second with an Ollie and Condo won with his Swayback.

Lunch over it was Duration time. Three made it to the fly-off with me using a Playboy - McCoy, Paul Farthing with his Bomber - Dooling special and Jim Rae with his Lion Cub. Paul won this after finally getting the Dooling working properly. Second was Jim Rae and third shared by Geoff Potter and me. Geoff landed out but I couldn't get off the ground - I ran out of battery. I must check the ignition battery before fly-off next time!

End of a good day's flying, we booked a spot at the White Tank hotel for flyers and had a good meal and social evening.

Sunday and Cabin Scramble. It was cool but sunny, blue sky - I hate blue sky! I lost my model in it during the scramble and damaged it beyond continuing. Six flew and I came 4th. Jim Rae came 3rd, Peter van de Waterbeemd was 2nd and Paul Farthing won the event.

Next was 1/2A Texaco. Nine entries with Paul and his little RC1 winning, Peter van de Waterbeemd came second and Jim Rae third.

We then flew Texaco. Only five flew as the conditions were a bit windy. Several

had backed out, with a couple saying that they wish they'd flown as conditions eased and the models handled the conditions easily. Three got into the fly-off, however it was an easy win for Peter van de Waterbeemd as Paul Farthing's model cut out on take-off and my motor refused to run at more than a fast idle. My previous flight had a heavy landing and I discovered, much later, the undercart had flexed enough to break the throttle arm. I still came third though!

When the points were calculated, the winner of The Coota Cup was Peter van de Waterbeemd. Congratulations Peter. I was runner-up and Paul Farthing third.

A great weekend, flying and socially. Thanks to all who helped make it so. Condo, Gail Scott, George Bishop and you, if you turned - up. Dave and Karen Paton, thank you for travelling so far to be with us, and for the great photos.

Peter Scott.
President.

Coota Cup Old Timer Weekend Results
Flown at West Wyalong. 2nd 3rd & 4th September 2022

Name	Model	R1	R2	R3	R4	Fly-off	Total
<i>R/C Old Timer Electric Glider</i>							
John Quigley	DG 67	253	360	360	283		1003
Peter Scott	Dragon	290	235	328	360		978
George Bishop	Thermal Sniffer	360	297	259	235		916
Peter van de Waterbeemd	DG 42	298	195	212	334		835
Peter (Condo) Smith	Albatross	196	258	167	278		832
Grant Manwaring	Archangel	302	250	223	264		816
Jim Rae	Plover	360	193	150	161		715
Basil Healy	Baffo	91	156				247
Paul Farthing	didn't fly						-
Dave Paton	N/A	299	227	214	292		818
John van de Waterbeemd	N/A	178	0	199	360		737
<i>Gordon Burford Event</i>							
Peter van de Waterbeemd	Ollie	196	300	300	300	794	1694
Jim Rae	Amazoom	300	300	274	300	779	1679
Peter (Condo) Smith	Dream Weaver	L/O	300	300	300	513	1413
Dave Paton	Stardust sp	265	300	300	300	433	1333
Grant Manwaring	Dixelander	178	266	300	300		866
John van de Waterbeemd	Ollie	0	300	236	282		818
Geoff Potter	Spacer	209	300	300	L/O		809
Peter Scott	Dream Weaver	239	201	238	270		747
Paul Farthing	Ollie	233	254	-	-		487
George Bishop	Zootsuit	crashed		-	-		-
<i>Nostalgia (2 out of 3)</i>							
Peter (Condo) Smith	Swayback	408	420	420			840
Paul Farthing	Ollie	420	420	-			840
Peter Scott	Dream Weaver	420	363	288			783

Name	Model	R1	R2	R3	R4	Fly-off	Total
Dave Paton	Jumping Bean	215	367	304			671
Peter van de Waterbeemd	Swayback	0	308	355			663
Grant Manwaring	Eliminator	289	0	-			289
<i>Duration (2 out of 3)</i>							
Paul Farthing	Lanzo Bomber	L/O	420	420		534	1374
Jim Rae	Lion Cub	420	420	420		497	1337
Geoff Potter	Playboy	420	420	-		L/O	840
Peter Scott	Playboy 113%	420	420	-		0	840
Grant Manwaring	Lanzo Bomber	299	353	358			711
Peter van de Waterbeemd	Bomber	420	109	65			529
Condo Smith	Playboy 113%	420	L/O	-			420
George Bishop	Playboy	49	284	0			333
<i>1/2 A Texaco</i>							
Paul Farthing	RC 1	386	420	420	420	531	1791
Peter van de Waterbeemd	Stardust sp	420	L/O	420	420	L/O	1260
Jim Rae	Big Old Plane	386	346	328	420		1152
John van de Waterbeemd	Stardust Special	420	99	420	307		1147
Peter Scott	Lil Diamond	329	410	333	293		1072
Dave Paton	Stardust Special	92	390	275	332		997
George Bishop	Atomiser	152	227	358	0		737
Basil Healy	Stardust Special	48	170	278			496
<i>Old Timer Texaco</i>							
Peter van de Waterbeemd	Lanzo Bomber	600	600	575	600	351	2151
Paul Farthing	Lanzo Bomber	600	600	600		0	1800
Peter Scott	Lanzo Bomber	600	600	600		0	1800
Grant Manwaring	Lanzo Bomber	548	431	600	550		1698
Dave Paton	Lanzo Bomber	486	483	505	600		1591
<i>R/C Cabin Scramble</i>							
Paul Farthing		1305					
Peter van de Waterbeemd		1236					
Jim Rae		1033					
Peter Scott		618					
George Bishop		414					
Condo Smith		180					
<i>Coota Cup Results</i>							
Peter van de Waterbeemd		19					
Peter Scott		23					
Paul Farthing		24					
Jim Rae		27					
Condo Smith		31					
Basil Healy		32					
George Bishop		34					
Grant Manwaring		35					
Dave Paton		37					
John van de Waterbeemd		43					



President Peter Scott presenting the Coota Cup to the winner for 2022, Peter van de Waterbeemd.



Top Left: Jim Rae with his Plover.
Top Middle: Basil Healy about to launch his Italian design Baffo. Launcher is Grant Manwaring.
Above: Peter Scott with his 2nd Place Dragon.
Bottom Left: Peter van de Waterbeemd on his way with his DG-42. Italian design.
Left: Peter van de Waterbeemd with his big DG-42 and son John.



Above: SAM 1788 Electric Old Timer Glider pilots at West Wyalong, left to right: John Quigley DG-67, John van de Waterbeemd, Basil Healy Baffo, Grant Manwaring Archangel, Peter Scott Dragon, Dave Paton, Peter (Condo) Smith Albatross, Peter van de Waterbeemd DG-42, George Bishop Thermal Sniffer, Jim Rae Plover.



Bottom Left: Dave Paton gives George Bishop's Thermal Sniffer an excellent launch for another good flight towards George's 3rd Place.

Left: Paul Farthing launching Grant Manwaring's Archangel.

Below: Winners of the 1st SAM 1788 Electric Old Timer Glider event Left to Right: 3rd George Bishop with his Thermal Sniffer, 1st John Quigley with his Italian design DG-67. 2nd Peter Scott with his Dragon.



Above: Left to Right George Bishop's Thermal Sniffer, Grant Manwaring's Archangel, front section of Basil Healy's Italian design Baffo.

Bottom Left: Peter (Condo) Smith's Italian designed Albatross. Bottom Right: Top view of George Bishop's thermal Sniffer.





R/C flying field at the AB Field, West Wyalong.

Top: View of field from the car park. Shed is for storage of models overnight and CD area.

Below L&R: Interior of the storage shed.

In front of the shed is the shade awning and pits area.





Left: Peter van de Waterbeemd and son John with their Burford models the Ollie.



Right: Dave Paton from Queensland discussing the unfortunate arrival of Paul Farthing's Ollie in the Burford event.

Bottom Left: Peter Scott with the ex-Bruce Knight Burford Dream Weaver.

Below: Burford Winners L to R Peter (Condo) Smith 3rd, Peter van de Waterbeemd 1st, and Jim Rae 2nd.





Above Left: Paul Farthing with his Ollie for Nostalgia.

Above Middle: Peter (Condo) Smith with wife May and his Swayback for the Nostalgia event.

Above Right: Dave Paton from Queensland with his Jumping Jack for the Nostalgia event.

Right: Winners in Nostalgia event L to R Paul Farthing with his Ollie 2nd, Peter (Condo) Smith with his Swayback 1st and Peter Scott with his ex-Bruce Knight Dreamweaver 3rd.





Above: Jim Rae, assisted by Peter and Gail Scott, preparing his Lion Cub for Duration.
Right: George Bishop's Playboy on its way in Duration. Assistant Grant Manwaring.
Below: Geoff Potter preparing his Playboy for Duration assisted by Peter (Condo) Smith.





Top Left: Pit area for Duration with Grant Manwaring and his Lanzo Bomber in the foreground assisted by Basil Healy.

Top Right: Dave Paton assisting Paul Farthing preparing his Lanzo Bomber in Duration event.

Above Left: Basil Healy releases Grant Manwaring's Lanzo Bomber in Duration event.

Above Right: George Bishop gets away on another Duration flight with his Playboy, assisted by Grant Manwaring.



Top Left: Geoff Potter with his Duration Playboy.

Left: Grant Manwaring with his Lanzo Bomber for Duration.



Right: George Bishop with his Playboy for Duration.

Below Left: Pits area for Duration with Jim Rae's Lion Cub in the foreground.

Below Right: Winners of Duration L to R Jim Rae Lion Cub 2nd, Paul Farthing Lanzo Bomber 1st and 3rd Geoff Potter and Peter Scott (absent).





Above Left: 1/2A Texaco Pits.

Above: George Bishop with his 1/2A Texaco Atomiser model.

Bottom Left: Peter van de Waterbeemd and son John preparing Peter's Stardust Special for 1/2A Texaco event.

Bottom Left: Jim Rae with his Big Old Plane 1/2A Texaco model.



Top Left: Peter van de Waterbeemd with son John and their 1/2A Texaco models.

Left: Paul Farthing celebrating his win in 1/2A Texaco event.

Below Left: Winners in the 1/2A Texaco events LtoR Jim Rae 3rd with his Big Old Plane 1/2A Texaco model, Paul Farthing 1st with his R/C-1 and Peter van de Waterbeemd 2nd with his Stardust Special.

Below Right: Peter van de Waterbeemd and son John with Peter's Lanzo Bomber for Texaco event.





Top: Texaco Fliers LtoR George Bishop assisting Dave Paton. Pau Farthing, Gail and Peter Scott with Jim Rae assisting, Peter van de Waterbeemd assisted by son John, Grant Manwaring assisted by Basil Healy.

Above: Grant Manwaring with his Texaco Lanzo Bomber.

Right: Texaco Winners LtoR Paul Farthing 2nd, Peter van de Waterbeemd 1st and Peter Scott 3rd.

THE RAMBLINGS OF AN ANCIENT MODELLER
THE BOTHERSOME BERRYLOID TROPHY WINNER
 From Basil Healy



I have always liked the look of the Berryloid Trophy Winner engine and promised myself that I would build myself one. In appearance it owes it's side profile to the Red Zephyr, but in all other aspects it is somewhat unique. It features a tightly cowled engine in a nicely streamlined nose and slight sweepback on the parallel chord wings (more about this later). Altogether, it looked like a fairly straight forward construction job. WRONG !!

On getting the plan enlarged to full size it became apparent that there were 1/4 x 1/8 strips added to the fuselage long-erons to keep the covering off all of the cross pieces. It looks nice on the finished aircraft, but did create some problems with packing pieces being required to support the cabin glazing. Needless to say there was no mention of this on the plan. Next, the empennage had to be made removable requiring the fitment of small hardwood blocks for the attachment screws. Finally, that swept back wing had its very hard 1/8 balsa spars at 90 degrees to the fuselage centre line. This meant that every rib had spar slots in a different position. Hence, care had to be taken to number all of the ribs to ensure their fitment in the correct position.

Some time ago I had acquired an O&R 60 at a swap meet. It had been test run but had never been fitted in a model. This was an obvious opportunity to use it. Fast forward about two months and the model was completed, the engine had been test run and it only needed some dry weather to get on our flying field to get in a test flight. Finally, after a couple of inspections the flying field was declared usable and I got in a short test flight. It needed down thrust and the glide was quite steep suggesting that the centre of gravity was too far forward (I had not taken the sweep back into account when checking the c.of g). This resulted in the c.of g. being about 5/8 inch too far forward. The addition of about one ounce of lead under the tailplane rectified that problem and a couple of tapered wedges under the engine mounting lugs provided down thrust. Once more the weather intervened so it was about another month before the next flight. This time the climb was O.K but the glide still required some up elevator to flatten it out. Back in the work shop I broke one of the rules of trim adjustment by making two changes before the next flight. I added another ounce of lead under the tailplane and 1/8" of packing under the rear of the tailplane. The centre of gravity was now at 40% of the mean wing chord and I was con-

cerned about longitudinal stability. Also, while ground running the engine I found that the fuel tank did not hold sufficient fuel for 96 seconds engine run required in '38 Antique. That was going to require the design and construction of a larger fuel tank.

This was not quite as simple as it initially looked. A separate tank connected to the original pick up tube on the O&R 60 was out of the question because there was no way that fingers could get into the area to attach the joining tube. The tank had to be permanently attached to the engine. Further constraints were that it had to fit between the engine bearers and between the engine back plate and the firewall only 3/8 inch be-

hind the engine air intake. The depth of the tank had to be kept to a minimum to obviate mixture change as the fuel level dropped. A total capacity of about 60 ml was what was needed. In practice this turned out to be 57 ml .

The next test flight proved that I may have a competitive model. The climb was good and the glide was quite reasonable considering the windy conditions at the time. My only concern at the moment is that I have not flown it up for the full 96 seconds engine run. Visibility at the top of the climb may be a problem for my old eyes . Basil Healy .



The Geezer

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



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Contest Director: Rod McDonald 0417 244 549 rodjmed@bigpond.com		



Hello All,
 There's little to report other than we've had a couple of competitions with not many fliers but we've at least had some model in the air. Rod has attached results and some pictures and there's not much for me to add.
 We've tried to be somewhat inventive as far as our Club contests are concerned but so far that's not been taken up by anyone and has certainly been frowned upon by AWA.

The field we use has been soaked because we've had a lot of rain as you can attest to at your end in the East as well. That makes it difficult to take off with low powered models such as '38 Antique and Texaco aircraft. Some tried down-wind and down-hill for take-off, but I would not do that. I had one attempt at getting off the ground with my Texaco model and could not get it airborne due to wheel drag in the mud, so decided not to fly. Our models are also suffering from a lack of use, as are the flyers, and that in combination with the not so brilliant conditions make for a fairly poor showing. We continue to hope for improvement.

On the personal front, I've been slowly working on finishing my Lanzo Airborne, fettling some of my models for competitions and doing minor repairs after, as well as making a fuel tank, intake tube and NVA for a GB 5 that I inherited that had those items missing and for which I could not find replacements. It has turned out reasonably good and it ran perfectly yesterday.

On the Airborne front, I've explored the possibility of using electric power as well as IC and the towline glider function and am appalled at the cost of that equipment. Rough estimates are in the order of \$A550.00 for the bits, I've never paid that much for an IC engine in my life, so much for the electric option.

Regards, Hans van Leeuwen.

SAM 270 1/2A Texaco Competition Beverley, 24 July, 2022. Report and photos from Rod McDonald.

For the second time this year the weather gods permitted us to complete an Old Timer comp on the scheduled day. It was a pity that given the ideal weather conditions we weren't able to attract more competitors, nevertheless we had an enjoyable morning and even needed a fly off to decide the result. What other sport could you imagine that would have two octogenarians fighting it out in the final.

Results:	(best 3)	Total Fly Off					
Rod McDonald	Brigadier	360	360	360	-	1080	764
Hans van Leeuwen	Atomiser	213	360	360	360	1080	651
Phil Letchford	Ranger	110	281	348	219	848	-



Winners L to R Phil Letchford 3rd, Rod McDonald 1st and Hans van Leeuwen 2nd.

WAMAC CONTEST CALENDAR 2022

	Free Flight Events	Oldtimer Events		
2 October	Open Power/ $\frac{1}{2}$ A Power		State/Club	Beverley
9 October		OT Glider/2cc	Club	Beverley
16 October	Open Rubber/E36		State/Club	Beverley
23 October		Tomboy IC/Electric	Club	Toodyay
30 October	Combined FAI		Club	Beverley
6 November				

Old Timer Duration and Nostalgia Competitions.
SAM 270, Beverley W.A. 3 July, 2022.
 Report from Rod McDonald and Photos from Hans van Leeuwen

Hi Everybody

We've done it at last, flown an Old Timer competition for the first time this year. Conditions for the day at Beverley were cold and fairly breezy but nevertheless flyable.

Results were no doubt a reflection of the time since our last Old Timer competition and only Greg McLure with his Cumulus in Nostalgia was able to put up a reasonably competitive performance.

For the rest of us hard luck stories were the order of the day. Hans' Bomber was damaged when hit by a gust on take-off and couldn't continue. Greg's ED 3.46 in his Bomber wouldn't start despite extensive flicking.

My Nostalgia model headed for the hills when I lost sight of it in flight, and by the time I returned from retrieving it the comp was over. I must thank Glenn Baldwyn for taking over the retrieval when it became obvious that I wasn't up to a several kilometre hike through crops.

Despite the problems everybody seemed happy to be flying again. The next competitions scheduled are open rubber and E36 on July 17 and 1/2A IC and Electric Texaco on July 24. Hopefully the weather will be a bit kinder next time out.

Results (maximums in both events - 420 secs) :

<u>Old Timer Duration</u>	Total (best 3)					
Rod McDonald	Foote Westerner/ASP61	165	181	314	244	739
Kevin Hooper	85% Lanzo Bomber/ASP61	169	142	158	245	572
Hans van Leeuwen	85% Lanzo Bomber/Magnum 61	296	-	-	-	296
Phil Letchford	Coronet/Thunder Tiger .09	158	-	-	-	158
Greg McLure	Lanzo Bomber/ED 346	-	-	-	-	0
<u>Old Timer Nostalgia</u>						
Greg McLure	Golberg Cumulus/OS 25	420	173	420	-	1013
Kevin Hooper	Buzzard Bombshell/Magnum 40	131	140	113	-	384
Phil Letchford	Dixielander	220	261	217	--	698
Rod McDonald	Southern Belle/OS 25	162	-	-	-	162
Hans van Leeuwen	Lucky Lindy/Supertigre G15	-	-	-	-	0



Left: Greg McClure launches his Cumulus. The other person in the shot was a visitor whose name I don't know



Right: Kevin Hooper with his Buzzard Bombshell.



Left: Phil Letchford's Coronet.



Left: Rod McDonald's Southern Belle

Right: Kevin Hooper holding and Rod McDonald starting the engine of his Foote Westerner.



Old Timer Std. Duration & Burford Duration Competitions
SAM 270, Beverley, W.A. Sunday, 14th August, 2022.
 Report from Rod McDonald and Photos from Hans van Leeuwen.

Hi Everybody

Decent weather at last! Sunday turned out to be exactly as forecast, dry and almost dead calm. As a result we had better than normal turnout and for the first time this year we had enough competitors to qualify as State events.

The results below are provisional since the club has decided to trial a more flexible participation arrangement which will allow competitors unable to attend on the day to submit times up to a specified end date. Details will be published shortly.

The next scheduled competitions are Open Electric and F1Q free flight on August 28.

RESULTS:

Standard Duration (Best 3 of 4)							Total	
Kevin Hooper	Buzzard Bombshell/K&B40	137	151	225	360		736	
Rod McDonald	Footo Westørner/OS40H	360	327	-	-		687	
Hans van Leeuwen	Playboy/Norvell	162	197	142	-		501	
Phil Letchford	So Long/OS40H	90	137	151	120		408	
Greg McLure	Nomad/OS40H	96	129	-	-		225	
Burford Duration (Best 3 of 4)							Total	F/O
Rod McDonald	Crescendo/Owen	300	300	300	-	900		425
Greg McLure	Dolphin/Owen	300	300	300	-	900		352
Hans van Leeuwen	Texan/BB	196	300	297	230	827		
Kevin Hooper	Spacer/BB	120	147	205	275	627		
Phil Letchford	Dixielander/PB	36	131	45	300	476		



Top: Kevin Hooper's Spacer for Burford Event.

Right: Phil Letchford's Dixielander for the Burford Event at the back and in front his So Long for the Std. Duration Event.

Left: Phil Letchford's Standby.



Above Left: Flight line pic, Brian, don't know his surname, Kevin Hooper, Rod McDonald, Greg McClure, Noel Mc Millan, Glenn Baldwin and Phil Letchford behind station wagon.

Above: Trio admiring Greg McClure's Dolphin for Burford, L to R Phil Letchford, Noel McMillan and Greg McClure.



Left Middle: Kevin Hooper's Buzzard Bombshell for Standard Duration.

Above: Kevin Hooper's Buzzard Bombshell for Standard Duration.

Left: Rod Mc Donald's Broken Foote Westerner, Standard Duration.

Right: Hans van Leeuwen's Playboy with Norvel 40 for Standard Duration.



'38 Antique and Texaco Competitions
SAM 270, Beverley, W.A. Sunday, 12th September, 2022.
 Report from Rod McDonald and Photos from Hans van Leeuwen.

At the start of the day conditions were ideal and we managed to complete the first comp, '38 Antique, without incident although not everybody managed to post a score. The results show a clear advantage for models powered by small diesels in good conditions and Greg McLure and Phil Letchford filled first and second places with diesel powered models. Of the spark ignition contingent only Kevin Hooper managed to get times in.

By the time we were ready to fly Texaco the weather had deteriorated to the extent that most decided not to fly.

'38 Antique

Greg McLure	Lancer	Sabre 2.5	409	464	600	1473
Phil Letchford	Folly II	Elfin 2.49	600	412	414	1426
Kevin Hooper	Flamingo	Anderson Spitfire	292	296	109	242
Hans Van Leeuwen	RC-1	O&R 60				-
Rod McDonald	Cumulus	Atwood 60				-

Texaco

Rod McDonald	Bomber	OS 60 OR	600	539	1139
Kevin Hooper	80% Bomber	Saito 45	93		93
Greg McLure	Bomber	OS 30			-
Hans Van Leeuwen	Power House	Saito 65			-



Above: Greg McLure launching his Lancer in '38 Antique with Rod McDonald timing.
 Bottom Left: Phil Letchford with his preparing his Folly II for '38 Antique event.
 Below: Hans van Leeuwen's Lanzo RC-1 with O&R60 small port engine for '38 Antique.





FOCUS ON RC

By Mel Gillott.

From
Airborne Magazine No.54 1982

Heading pic shows some of the Old Timers at the Illawarra field last June. L to R: Simplex, New Ruler, Miss Philadelphia and Playboy (right at back,) Clipper (and Mel's field box), TD Coupe - and what's that beside the Lanzo in the centre? D.O. photo.

Last October, in AIRBORNE number 47, this column announced a promising new sports event in the guise of "R.C. Old Timer duration" (R.C.O.T.D) Well, it's had what you might call a slow start. Following publication of the event details several people indicated great interest and a couple of Clubs looked like giving it a try but, as often happens it was left to my own Club, the ever progressive Illawarra M.A.C. to take the plunge. It followed that on 20th June 1982, I.M.A.C., and the great turnout of competitors and spectators were justly rewarded with one of the most pleasant events ever attended. And I am not just saying that because I won a pot! The beautiful weather helped, but it was

the sight of about twenty pre-1942 free flight aircraft, flown easily and safely with the help of radio control, powering skywards then gliding gracefully down to a spot landing that so impressed all those that witnessed the event. It **was** fun.

Actually two events were held with most flyers opting to enter both. The American "Texaco" rules had previously proven successful in the Newcastle, NSW area, and so to make a day of it and cater for those having reservations about the new event we had two independent competitions -flown concurrently. Here's a reminder of the pertinent points of the R.C.O.T.D. rules.

Eligibility

Any pre-31.12.42 F.F. aircraft fitted with engine no larger than recommended.

Static Judging

Workmanship max. 20 pts. Realism max. 40 pts. Add once to total flight score.

Engine Run

Schnuerle 15 secs, Diesel and **Four Stroke (New Rules)** 25 secs, Spark 30 secs, Electric 30 secs, Deduct 10 pts for every second of engine over-run.

Flight

One point per second from aircraft release up to a max. of 3 minutes. (180)

Bonus Points

Add to each flight:-

- 1) Five points for each full year the aircraft pre-dates 21.12.42
- 2) Ten points for R.O.G.
- 3) Ten points for landing in designated area.

The rules are very straight forward and worked well on the day. It's really just a powered glider event with old timer models serving as a basis and "leveller" of competitors. The Texaco rules have similar aims but with the engine run determined by the thirst of the engine. Texaco is a fuel allotment event—you get 7.7 ml of fuel for every kilogram of aircraft weight (or 3.5 ml for every pound). This complicates the organisation somewhat in that models must be weighed and someone employed to administer the fuel for every flight. Also the flyer has to launch immediately the engine starts in order to make the most of the precious fuel, Reminds me of my Team



Ian Avery's Simplex with OS40FS; 11 x 4 prop. Climbs vertically with no take-off run to speak of. Radio 3 function: all flying tailplane (VIT) plus rudder and throttle. Control surfaces actuated by cables (closed loop). Fuselage strengthened with 1/4 balsa doublers; RC gear well forward for safe balance. Avery photo.

Race days. However a plus for Texaco is that no engine throttle or cut-off is required.

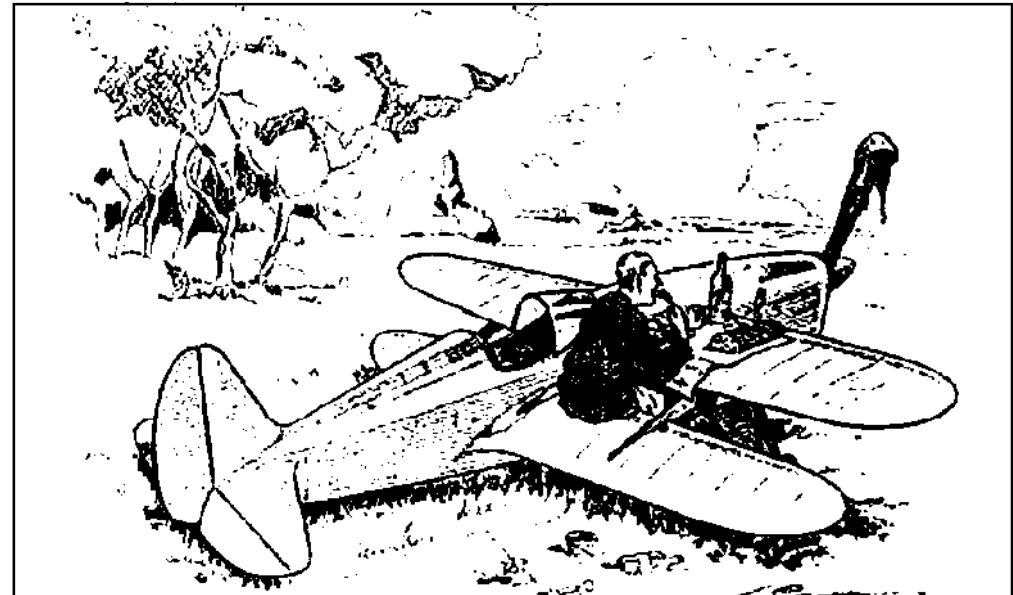
On the day most flyers opted for both events and five rounds of each was easily accommodated. A successful day can be seen in the closeness of the scores and the outcome didn't seem to favour any particular engine of aircraft combination. The photos express more than mere words can tell. Similarly the participants were happy with both sets of rules - so much so that they immediately voted to try the same event format again later in the year. Even more entries are expected next time as spectators were seen to rush off and commence building an R.C. old timer. Even hardened free-flighters were impressed with the similarity to their O.T. event but without the trimming and retrieval

RESULTS:	R.C. OLD TIMER	DURATION	8 ENTRIES	
M. GILLOTT	COMET CLIPPER MK 2	OS 40 IGN.	848	
B. KNIGHT	T.D. COUPE	OS 35	767	
M. BEATTY	NEW RULER	OS 40 4S	753	
K. SUTHERLAND	LANZO RECORD	OS 60 FGR.	624	
	TEXACO	12 ENTRIES		
G. BROWN	PLAYBOY	OS 40 FS	1930	
J. TIDEY	PLAYBOY	FROC 500	1814	
K. SUTHERLAND	LANZO RECORD	OS 60 FGR.	1763	
W. GORDON	QUAKER	OS 40 IGN.	1665	

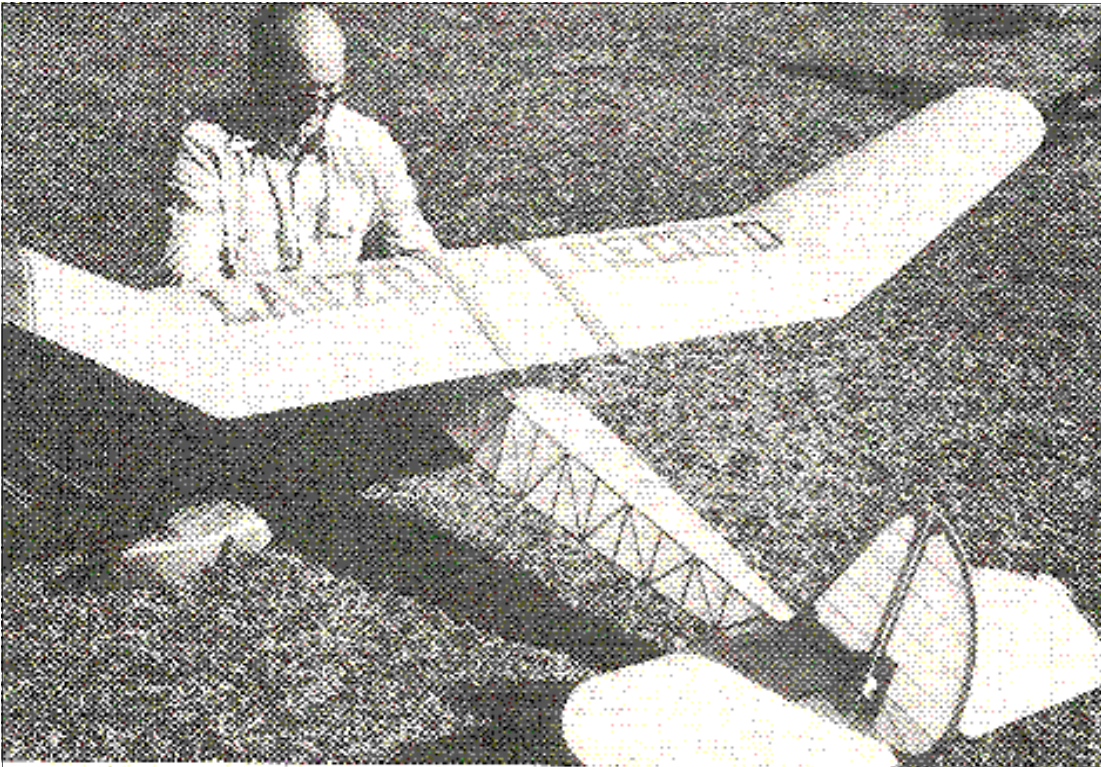
problems. It's also significant to note that during the 80 or so official flights there was not one prang.

So spread the word and give R.C. Old Timer a try - you'll like it.

Editor to John Pond: Well, it has happened at last! We are on the road you signposted years ago.



Halt at 7 p.m. near a grove for dinner before the last stage, the return to the city. Enjoy your meal! The other advantage of the AS-20, a biplane with total offset and low inter-plane: The table is always ready to be set and the seat welcomes the guest who takes his provisions, cutlery and stove from one of the chests.



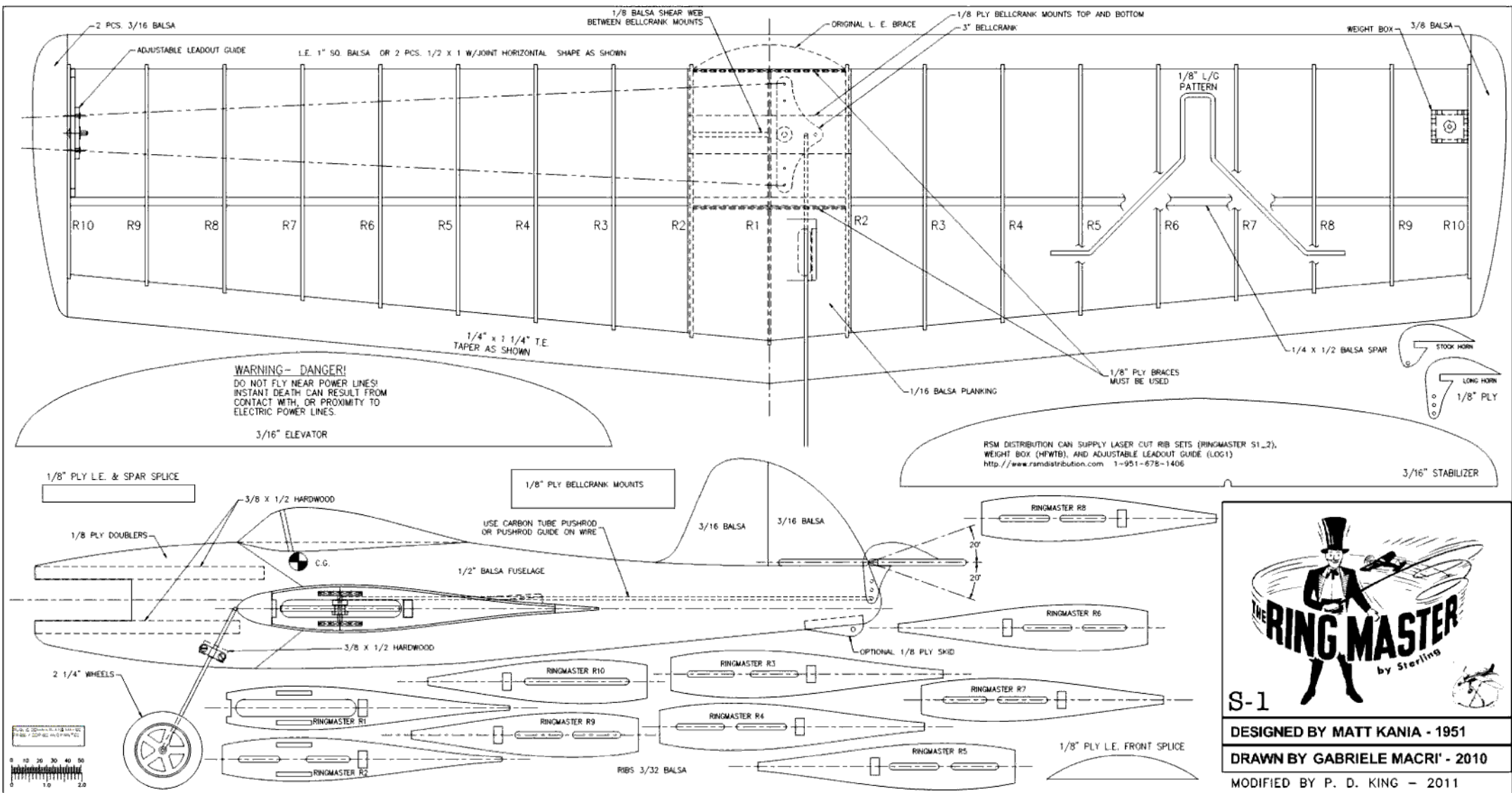
Kevin Sutherland (Muswellbrook) built this magnificent LRB from John Pond plans. Has OS60 Took 3rd in Texaco and 4th on OT. Eight foot span. 6 1/2 lb. Photo by David Owen.

It's a Flying Circus of
STUNTS!

Span 42"
For B-C Engines

The RING MASTER

Designed by Matt Kenia . . .



PDF Plan: https://outerzone.co.uk/download_file.asp?planID=3501&FileType=Plan&Filename=Ringmaster_S-1_oz3501.pdf

This is a plan file for a Ringmaster S-1 which was kitted by Sterling Model Co in 1950. This is the profile one designed by Matt Kania. The original kit did not have an actual plan but only an assembly instruction sheet. The plan was made by tracing the parts from a kit and forming them into a CAD file and subsequently converted into PDF file. The file will print a full sized plan if printed at 100%. This is in 'public domain' so anyone can copy and use the file.





Above: Owen Cameron (Australia) with his Ringmaster S-1 scratch built from plan.



Left: John Lewis recently took up control line flying again (his main interest being Free Flight) and was told about the October Ringmaster event. He built the model from the Outerzone plan and is using a 1oz Sullivan tank with an OS 25 FX so he can chalk up a number of short flights for the event. The model performs well (fairly quick) but will use larger tank for general sport flying.

Sterling Ringmaster Built to Legacy Materials and Methods

When John Penney got his Sterling S-1 Ringmaster off of eBay, he decided to build the kit as close as possible to the materials and methods that Matt Kania may have used when he built the original Ringmaster in 1950.

As such the kit was assembled using toluene based model glue, "silksan tissue", cloth hinges placed accurate to the plans, coating with brushed on butyrate dope, with colours exactly as described in the plans ("Original model was painted as follows: wings and tail - cream, fuselage and rudder - red, nose of fuselage (F2's) - black, canopy - white"). Close inspection of the image on the plans and "yellow box" boxtop, show narrow black stripes bordering the red panels on the wing and stabilizer, and another thin one at the base of the canopy. Note: the white box image is not accurate to colours described in the plans.

Measurements were made and scaled up for the location of the "Ringmaster" decal and checkerboard pattern. It was found that a checkerboard decal with $\frac{1}{2}$ " squares was not accurate. The outer row included 9 squares (which appear to be black like the nose), and when scaled to match the plans and box image, the squares had to be a smidge larger (about $\frac{1}{32}$ "), to match the original image. Checkerboard masked and was painted on.

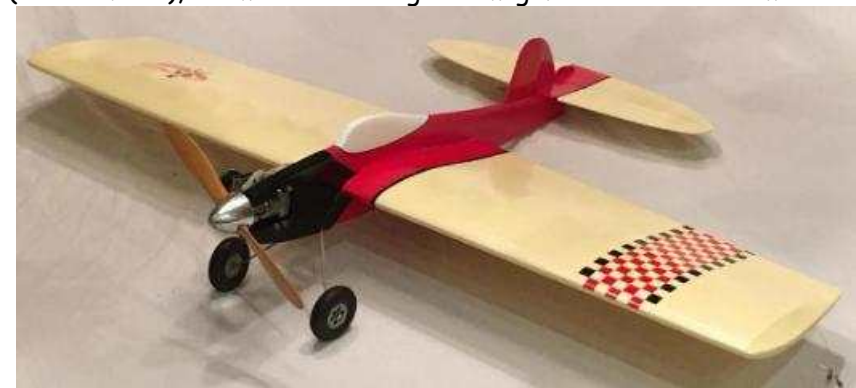
The finish is not "pristine" to today's materials and methods but meant to be as it might have ended up in 1950.

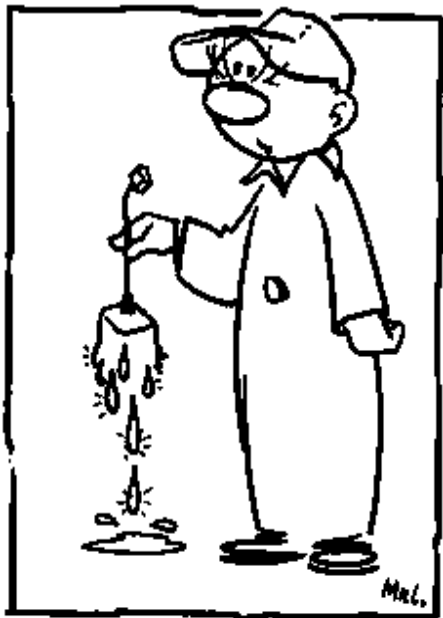
Other items to make it accurate to the plans include: use of the kit plywood control horn, cut-off safety pin for control rod guide, Perfect large bell crank modified per plans, soldered washers for control rod retainers, no tail skid or wheel, and vintage Veco 2 $\frac{1}{2}$ " wheels retained with soldered washers.

A vintage Perfect #10 wedge tank (per plans) was mounted with a "solder strip of metal (cut from tin can)". The oldest "K&B .35" John could find was a 1954 Torpedo with left hand exhaust (per box and plan image). It is mounted with legacy, round head, non-zinc-plated 4/40 machine screws. The front end is rounded out with a vintage Top Flite 10-6 wooden prop and a 1 $\frac{3}{4}$ " Veco spinner.

As stated before, the paint job was not intended to be an award winning, hand rubbed, mirror finish. Instead the intent was to make it, as best could be guessed, like it might have come out of Matt Kania's workshop over 70 years ago!

It was flown during the October 2020 Ringmaster Fly-A-Thon.





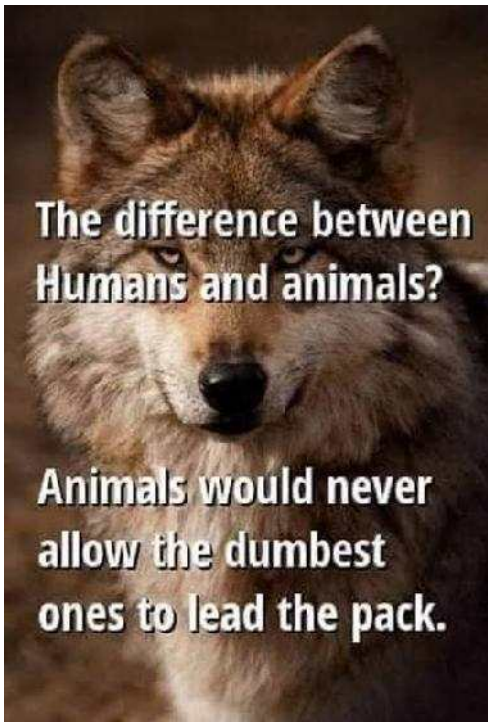
The difference between Humans and animals?

Animals would never allow the dumbest ones to lead the pack.

I FORGOT TO TURN-OFF THE CHARGER!



Although COVID-19 spreads mostly via the mouth and nose, scientists now conclude that the greatest risk comes from assholes.

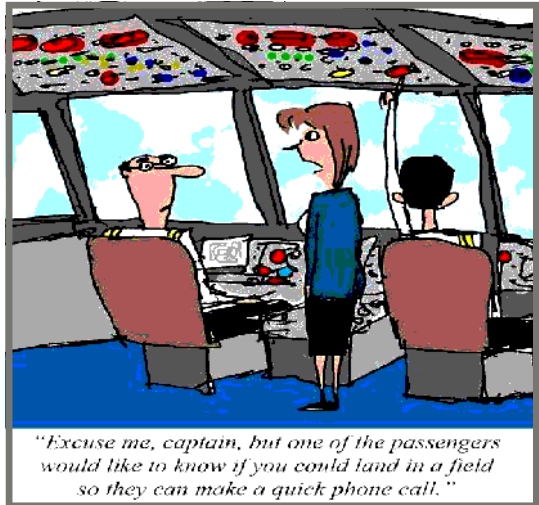
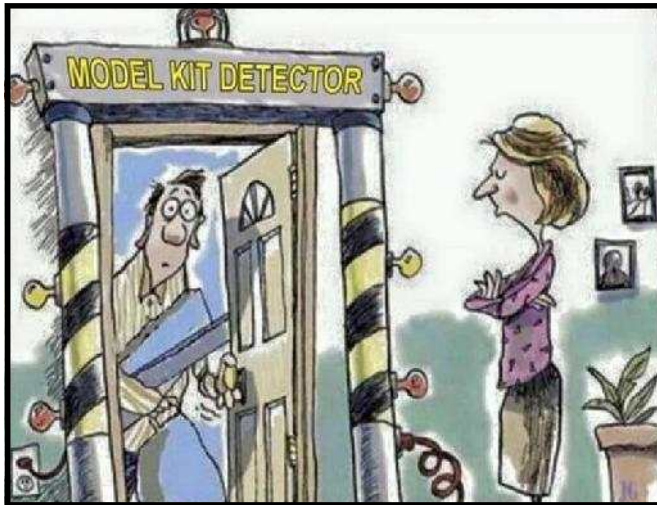


"You know the lockdown rules; only dogs are allowed to go for a walk."
#lockdown2020

The ATO has returned a Townsville man's Tax Return after he apparently "incorrectly answered one of the questions".
In response to the question, "Do you have anyone dependent on you?"
The man wrote:

1. 2.1 million illegal immigrants,
2. 1.1 million crackheads,
3. 4.4 million unemployable scroungers,
4. 80,000 criminals in over 85 prisons plus,
5. **450 idiots in Parliament, thousands of 'retired politicians' and an entire group that call themselves 'Senators'**

The ATO stated that the response he gave was "unacceptable."
The man responded by asking the ATO, "Who did I leave out?"



"Excuse me, captain, but one of the passengers would like to know if you could land in a field so they can make a quick phone call."

So.....you've been eating hotdogs and McChickens all your life, but don't want the vaccine, because, " you don't know what's in it"?

TRIVIA
What off-the-shelf addition did NASA Scientists add to the Voyager Probes a the last minute?

Crazy Glue	Bamboo Skewers
Egg Timers	Aluminium Foil

**ANSWER:
ALUMINIUM FOIL**



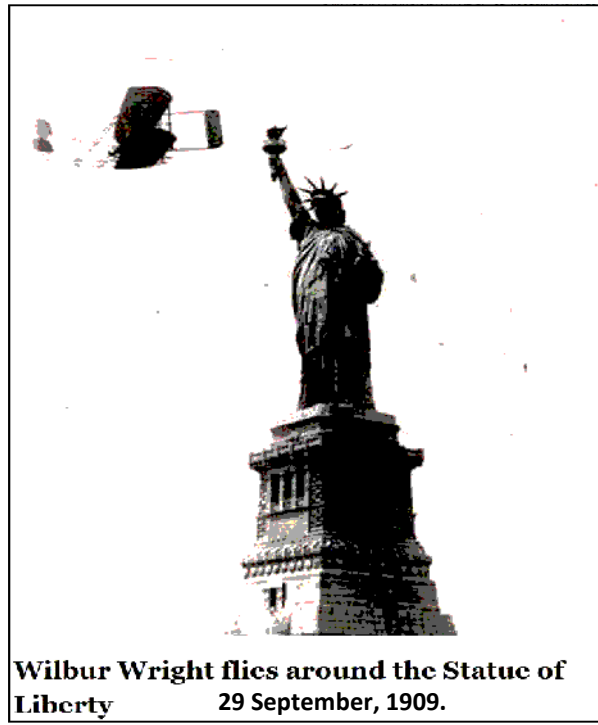
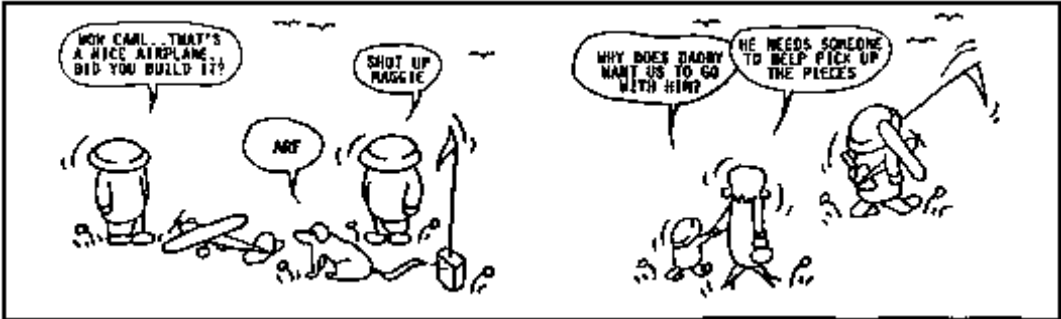
You may use it to cover baking lasagne and wrap left-overs, but the humble aluminium foil found in your kitchen drawer has uses that extend well beyond culinary considerations. In fact, the farthest traveling space probes humanity has ever launched into space owe some of their longevity to the simple kitchen aide.

Shortly before the Voyager program was set to launch, NASA scientists were more than a bit paranoid that deep space might be more hazardous than they imagined for the soon-to-prove-plucky little space probes.

The only problem with delaying the mission was that it would scrap the entire project. The Voyager launches hinged on a planetary alignment that only occurs once every 175 years. Any delay to fortify the probes with custom made shielding would delay them beyond the launch window and they'd miss the alignment they desperately needed to make the launch and travel path work.

Rather than risk a failed mission after they had invested so much energy and money into the project, the scientists at NASA grabbed an off-the-shelf solution and got to work. Both probes received an upgrade before launch that included wrapping all of the cabling and critical connection points in off-the-shelf aluminum foil to protect them from extra radiation the scientists feared might be out there. In the photo shown here of Voyager 2 being worked on in a clean room, you can see the cabling on the right-hand side is wrapped in layers of aluminum foil.

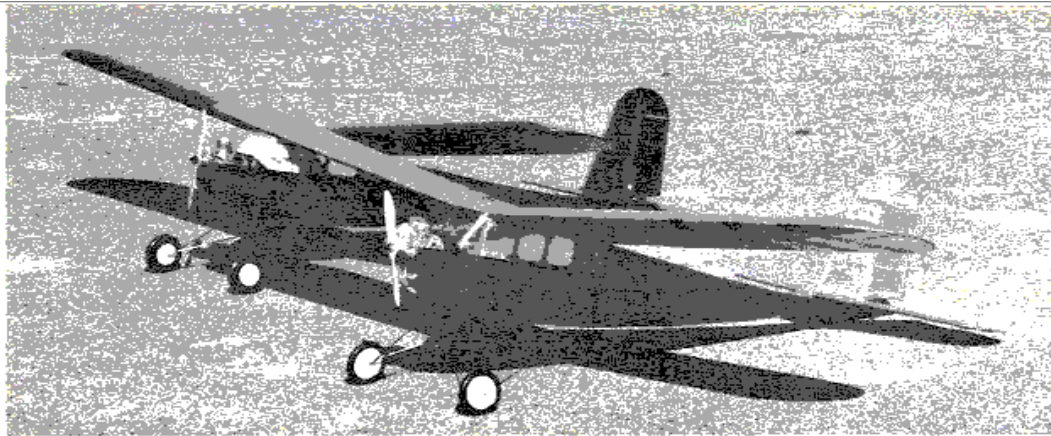
That extra shielding most likely saved the day as both probes weathered the enormous radiation belts around Jupiter unscathed during their pass-by approach in 1979. In November 2021, the probes are approximately 14.5 billion miles (23 billion kilometers, Voyager 1) and 12 billion miles (19 billion kilometers, Voyager 2) from Earth, thanks in no small part to the expert planning at NASA and that extra bit of off-the-shelf modification they enjoyed at the last minute.



Wilbur Wright flies around the Statue of Liberty
29 September, 1909.

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One good Turner deserves another! Jim Reynolds' and Kelso Barnett's Turners line up for our lead photo.

Turner Special

By KELS0 BARNETT . . . What's so "special" about the Turner Special? You probably couldn't find an easier to build O/T that also qualifies for Antique, and can also be a hot competitor. Plans by Jim Reynolds.

• "Jim, I need to build a .40 size old timer that is big enough to do well in Limited Engine Run and Antique. One model that keeps popping into my head is the Turner Special."

"What the hell is a Turner Special?" asks Jim. (He is a young 54 and does not know about all these good things.)

"Well," I said, "it is an April 1936 Model Airplane News plan that would win an ugly contest hands down."

"Do you have a picture?" asks Jim. "Yes, I think so, somewhere in this pile of magazines."

Down on the floor we go pouring over the old magazines. In a few minutes we found it. Kind of ugly, we both agree.

Ugly or not, I ordered the plans from John Pond. While I had John on the phone, I asked him what he knew about the Turner Special. John told me he had built one for electric power. It flew OK, but he thought the structure was kind of weak.

Two days later, the plans arrived, and Jim and I were back on the floor again. It didn't look too bad. The wing spar locations were redrawn, the elevator and rudder hinge lines were added, and a rib template was made. I started on Turner number one.

The construction went very fast. In a few days it was time to figure out where the engine mount should go. But first, what engine to use. I made a call to my neighbor George Aldrich and asked him what he could do with my whoo-pee good ten year old, but brand new HP40. He told me! George did his thing and the engine does its thing.

As the bird got closer to completion, Jim was getting more and more interested. He was beginning to drool because my construction weights are always heavy and this bird was staying extremely light. As soon as I was finished with the plans, Jim started Turner number two. Being retired, Jim had time to build all day long, and the two planes were completed on the same weekend.

My Turner weighs three pounds ten ounces, with an HP40 for power. The model was covered with silk. Three coats of dope were applied over a coat of gelatin sizing.

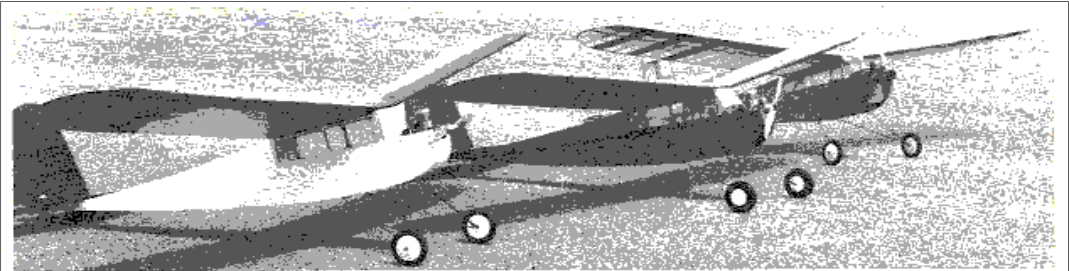
The use of Knox Gelatin for sizing and

filling silk has been described by Dee Mathews. It does work very well. Dee, however, did not discuss the application and the mess which is created. The gelatin was mixed according to the instructions on the box. I applied the gelatin with a three-inch paint brush. You will be able to see a film all over the silk when it has filled. Be sure and do this in the garage or outside, as the gelatin will drip from the covered surfaces for hours. The end result is worth it, however, for both weight savings and cost.

Jim's Turner, powered with a K&B 6.5, weighs four pounds four ounces. It was also finished with silk and dope. The dif-



Up and away! Kelso's Turner eight feet out and eight feet up a moment after release. That means a 45-degree climb, which isn't hard to believe from this photo.



And in case two wasn't enough, Wayne Belcher adds another one, at far left. Ship is extremely quick and simple to build.

ference in weight between the two models seems to be due to the difference in weights between the engine, engine mount, and wheels.

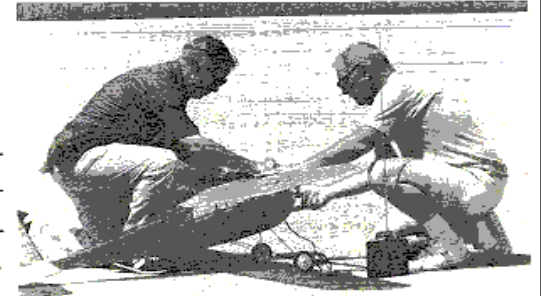
Wayne Belcher, who has constructed a third Turner Special, used Monokote covering, and it has been very satisfactory. On the wing, which was the most critical portion, the covering was tacked all around the outline and lightly shrunk with a heat gun. Then it was ironed onto each rib and all the outline sheeting. A final shrinking with a heat gun produced a very rigid wing. It has successfully withstood an unintentional six-foot loop immediately after take off.

The climb performance of the airplane is awesome. It goes like this: release the model, roll three feet, rotate, climb at an 80 degree angle, kill the engine, and then dump the nose to level flight. It really is a beast! The lighter model has a noticeably slower glide, which requires absolutely maximum rudder throw to maintain directional control. In any wind above 12 MPH, the model will be moving backwards at best glide trim. With some down trim it will grudgingly penetrate.

Early in our flight training program with old timer models we proved conclusively to ourselves that you cannot use plastic control rods. They change length when the temperature changes. Repeatable trim settings are a necessity for competition flying so, use solid push rods.

The plans show the firewall located for a rear intake engine. If you plan to use a front intake engine, just move the engine

Jim Reynolds, who drew the plans, holds model and glow plug clip as Kelso Barnett gets ready to flip prop.



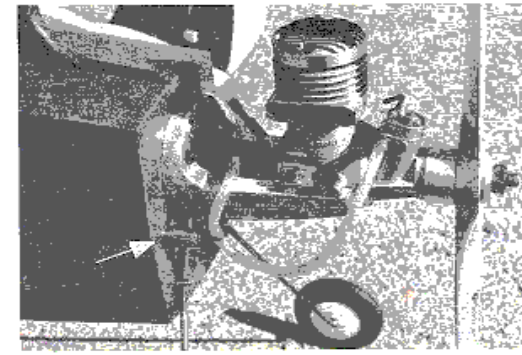
forward on the mount. The original 1936 plans showed an aluminum windshield. If you use a rear exhaust engine, this is still a good idea. Jim used a balsa block, epoxy covered, which worked well. The one ounce fuel tank is located in the cabin area just behind the windshield.

The controls were set up as follows: rudder 1-1/2 inches each side of center; elevator 1/2 inch up and 1 inch down.

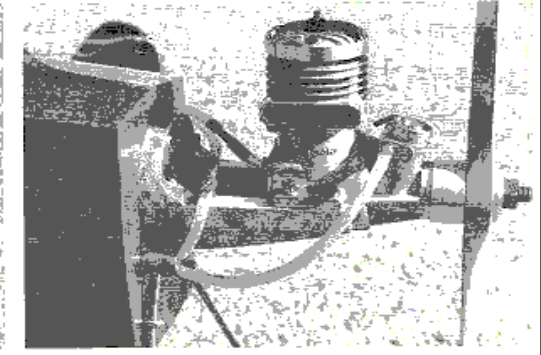
The fuel cut-offs that we use are very simple and reliable. To make one, cut a 1" square of 1/4" plywood and drill a 5/16" hole in the center. Glue a 3/4" long piece of 5/16" dia. brass tubing in the hole. Now glue this assembly to the firewall where it will be right in line with the throttle servo. When the glue is dry, center drill for 1/32" piano wire. Now form a loop in the end of a piece of 1/32" wire. Place the wire

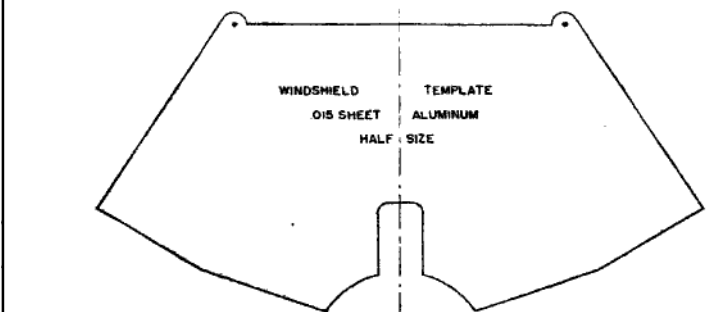
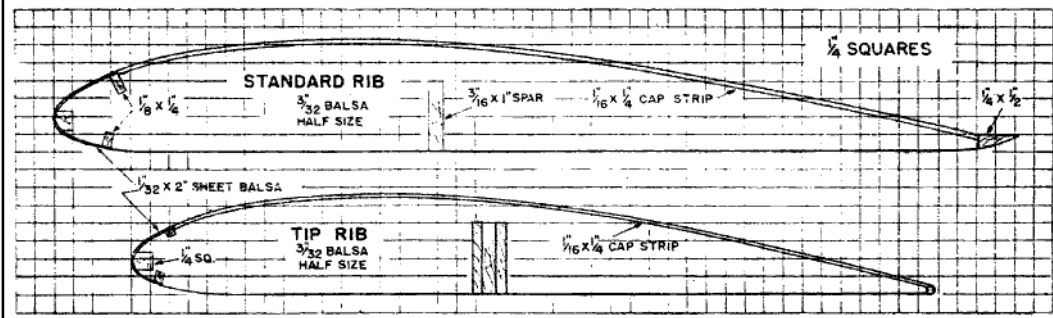
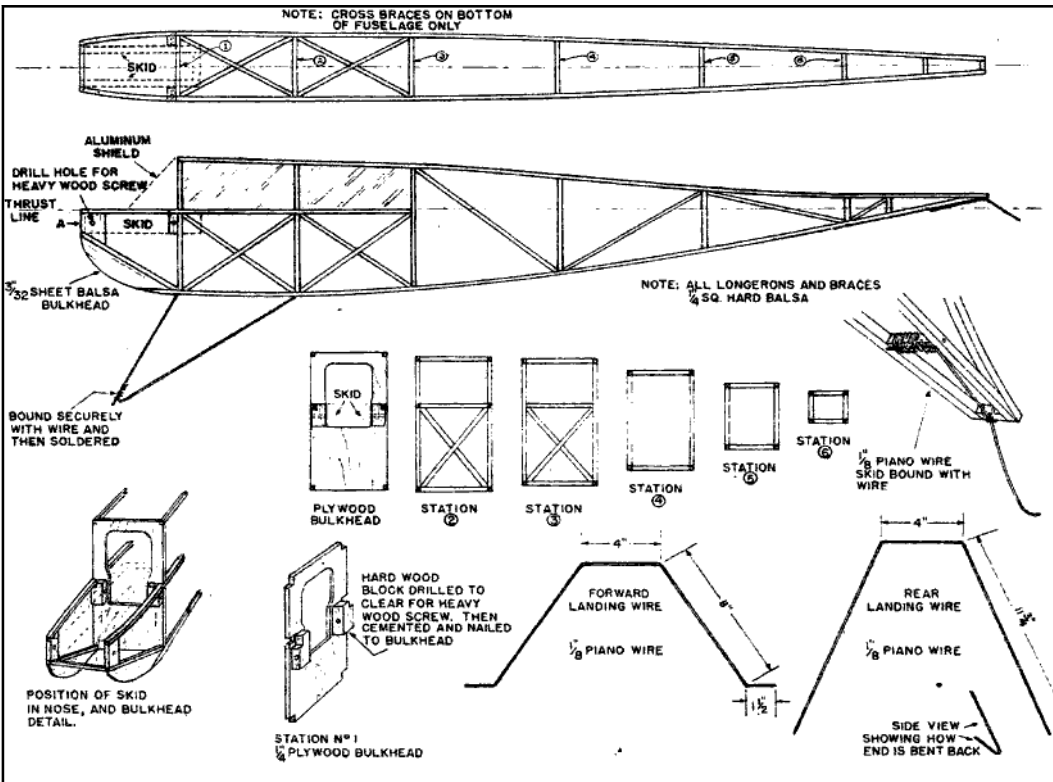
through the hole in the firewall with the loop outside. The other end goes to the servo arm. Run the fuel line from the tank through the loop to the carburetor. To adjust, put the throttle stick in the high speed position and move piano wire linkage until fuel line and the loop are fully exposed. Place the throttle stick in the low speed position and the loop should have pulled the fuel line into a sharp crease for an instant kill.

The Turner is a competitive airplane. Jim took his to the '83 SAM Champs and placed second in Antique Glow. Mine placed second in C Glow at the seventh annual Plansmen Labor Day Contest. The 1984 SAM rules, which allow a twenty-second engine run for schuerle engines, will almost guarantee the Turner Special a seven-minute max in any decent air. •

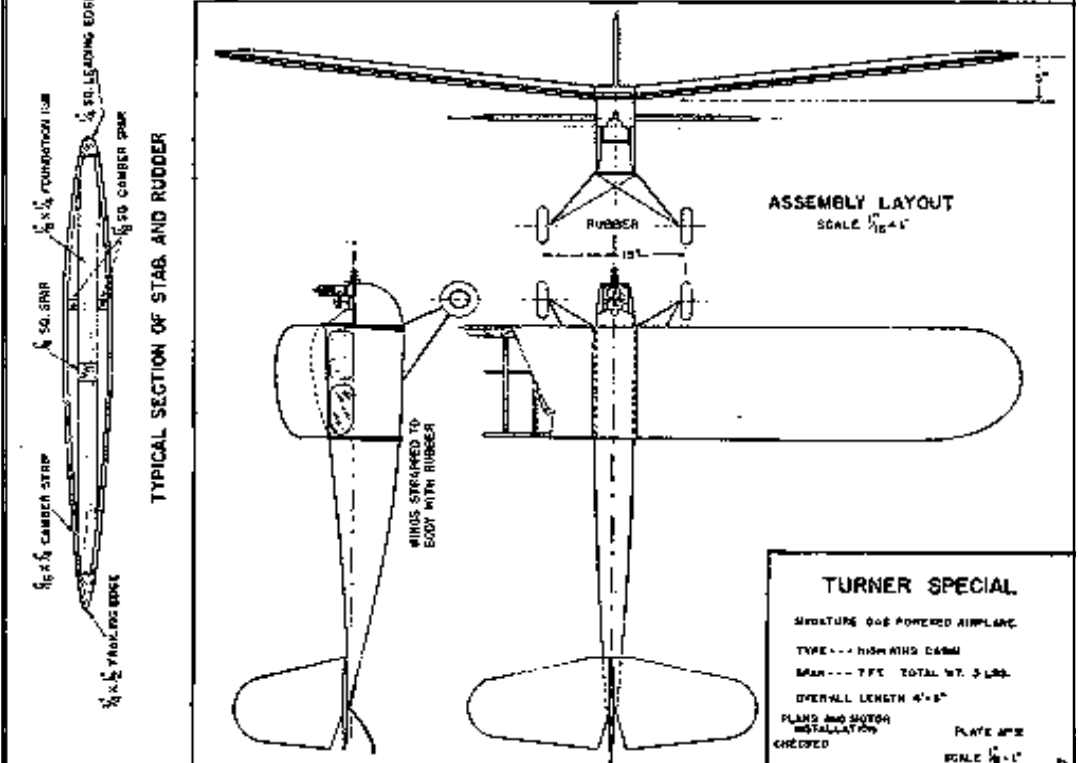
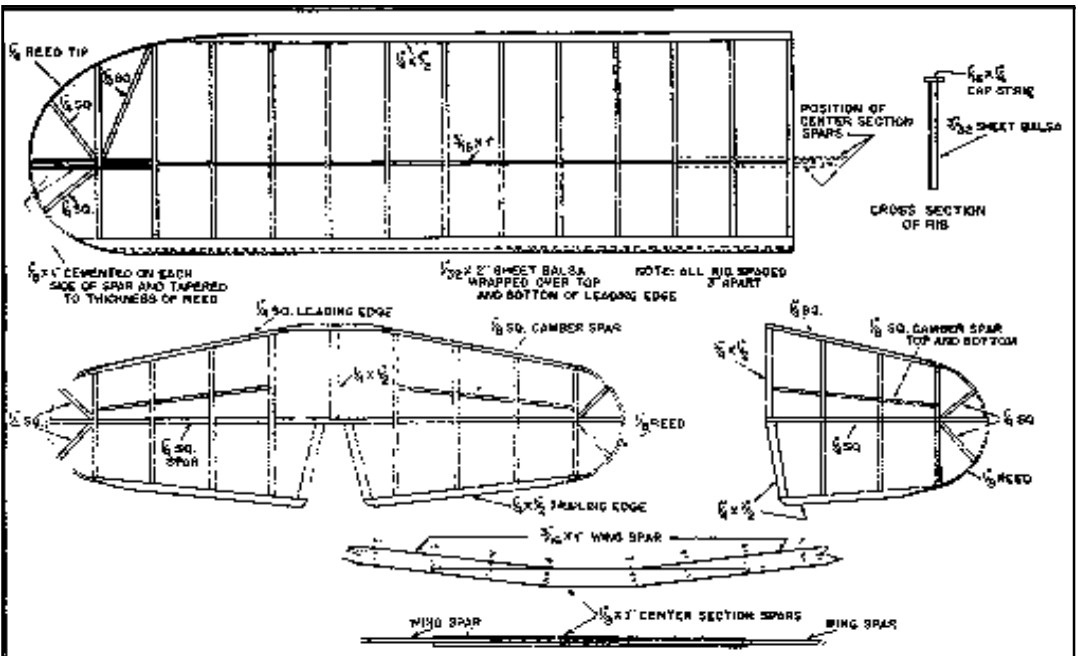


Simple but effective fuel cut-off shown on uncowed Playboy and described in text. Wire loop around fuel supply line is pulled into large diameter brass tube by servo, kinking tube and pinching off fuel.

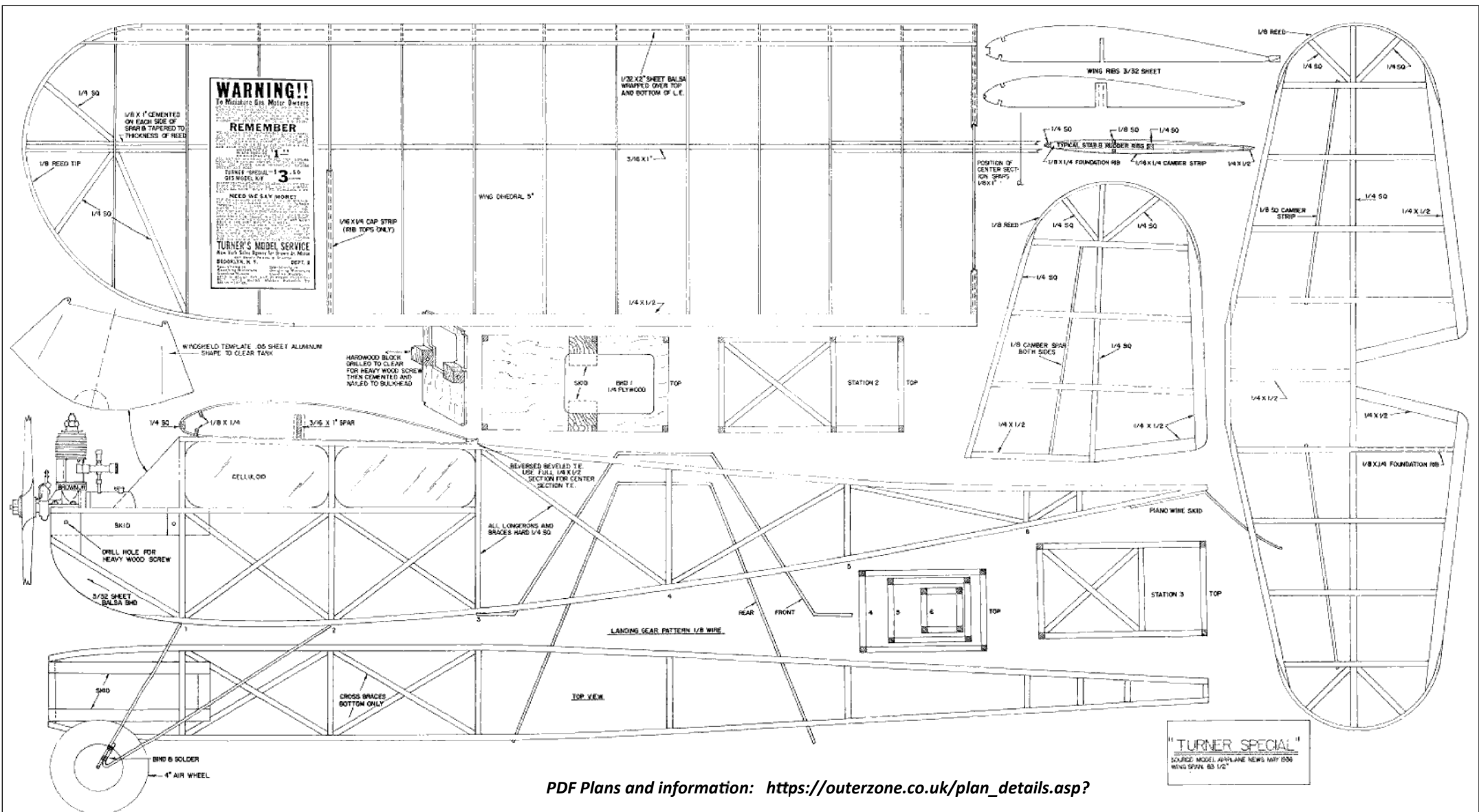




TURNER SPECIAL
 MINATURE GAS POWERED AIRPLANE
 TYPE --- HIGH WING CABIN
 SPAN --- 7 FT. TOTAL WT. 3 LBS
 OVER-ALL LENGTH 4'-6"
 PLANS AND MOTOR INSTALLATION CHECKED [Signature] SCALE 1/16"=1"



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PDF Plans and information: https://outerzone.co.uk/plan_details.asp?

About this Plan

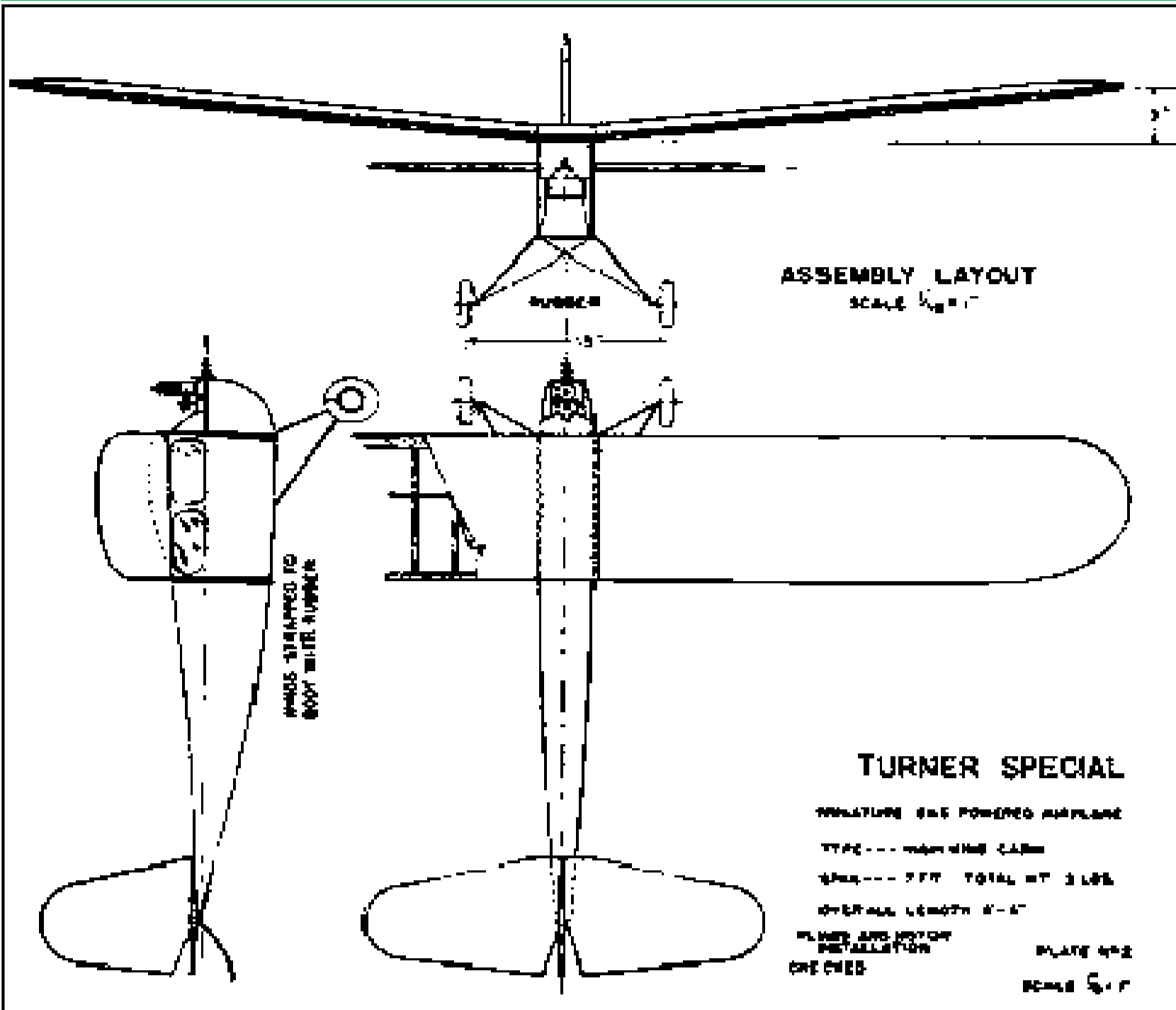
Turner Special. Free flight gas model.

Quote: "What's so 'special' about the Turner Special?" You probably couldn't find an easier to build O/T that also qualifies for Antique, and can also be a hot competitor. Turner Special, plans by Jim Reynolds.

Jim, I need to build a .40 size old timer that is big enough to do well in Limited Engine Run and Antique. One model that keeps popping into my head is the Turner Special. What the hell is a Turner Special? asks Jim. (He is a young 54 and does not know about all these good things). Well, I said, it is an April 1936 Model Airplane News plan that would win an ugly

contest hands down! Do you have a picture? asks Jim. Yes, I think so, somewhere in this pile of magazines!

Down on the floor we go pouring over the old magazines. In a few minutes we found it. Kind of ugly, We both agree. Ugly or not, I ordered the plans from John Pond. While I had John on the phone, I asked him what he knew about the Turner Special. John told me he had



built one for electric power. It flew OK, but he thought the structure was kind of weak.

Two days later, the plans arrived, and Jim and I were back on the floor again. It didn't look too bad. The wing spar locations were redrawn, the elevator and rudder hinge lines were added, and a rib template was made. I started on Turner number one.

The construction went very fast. In a few days it was time to figure out where the engine mount should go. But first, what engine to use. I made a call to my neighbour George Aldrich and asked him what he could do with my whoo-pee good ten year old, but brand new HP40. He told me! George did his thing and the engine does its thing.

As the bird got closer to completion, Jim was getting more and more interested. He was beginning to drool because my construction weights are always heavy and this bird was staying extremely light. As soon as I was finished with the plans, Jim started Turner number two. Being retired, Jim had time to build all day long, and the two planes were completed on the same weekend.

My Turner weighs three pounds ten ounces, with an HP40 for power. The model was covered with silk. Three coats of dope were applied over a coat of gelatin sizing.

The use of Knox Gelatin for sizing and filling silk has been described by Dee Mathews. It does work very well. Dee, however, did not discuss the application and the mess which is created. The gelatin was mixed



according to the instructions on the box. I applied the gelatin with a three-inch paint brush. You will be able to see a film all over the silk when it has filled. Be sure and do this in the garage or outside, as the gelatin will drip from the covered surfaces for hours. The end result is worth it, however, for both weight savings and cost.

Jim's Turner, powered with a K&B 6.5, weighs four pounds four ounces. It was also finished with silk and dope. The difference in weight between the two models seems to be due to the difference in weights between the engine, engine mount and wheels..."

Supplementary file notes

Article (later, from MB, June 1985).
Original plan drawing pages as printed in MAN 1936.

User comments

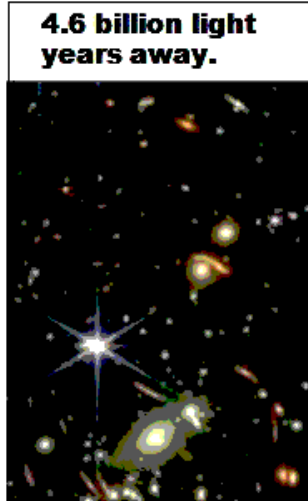
The article included should be paired with the slightly <https://plans.modelaircraft.org/product/turner-special-3/> Image #3 is Jim Reynolds' built from that plan.

It differs slightly in construction and does not have the reflexed TE.

Tom - 06/07/2021

Agreed. Does anyone have a good clean scan of the MB plan (in Jun 1985, Kelso Barnett)? With that, we can split this into two separate listings.

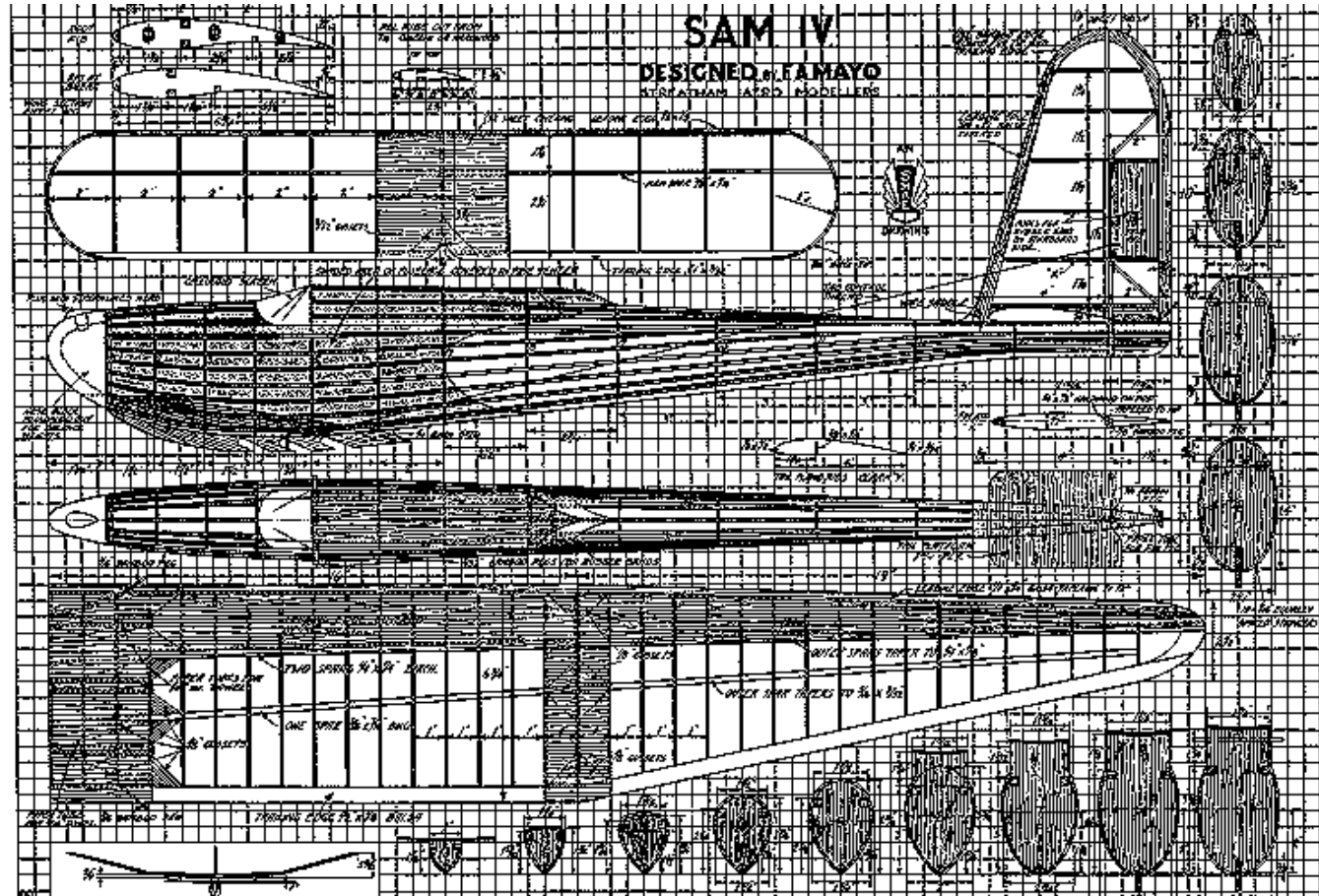
Steve WMD - 07/07/2021



4.6 billion light years away.



3 metres away security cam.



OLD ENGINE ANALYSIS

OLD ENGINE ANALYSIS #15...GHQ
By Charlie Bruce



I hesitated to put the GHQ in these reviews, but then most of us had a GHQ at some time in our youth, and besides it looked like a challenge to get one to run well.

The GHQ first appeared in 1936 as a mass-produced model of the

Loutrel engine. Though heavy, the sand cast Loutrel was a good engine. Early GHQ's were pretty well made, with a cast iron piston and a one piece counter balanced crank shaft.

The engine will run, though do not perform with any star quality. As production went on and the price dropped, so did quality. The crank bearing diameter was reduced from 3/8" to 5/16" and the crank itself was made from an unbalanced forging. Machined finishes were generally poor. The piston was changed to a sheet metal stamping and compression was fair to non-existent. In addition to the mechanical problems mentioned, the engine suffers from several design deficiencies which contribute to the difficulty of operation. To wit:

1. Low compression ratio
2. Piston baffle too short
3. Needle valve too blunt
4. And most important....faulty port timing

The drawings for the original GHQ "Aero" engine show an exhaust side baffle on the piston. Removal of this baffle to simplify production changed the port timing. According to my degree wheel, the GHQ exhaust stays open about 180 degrees. This is radical for even a tuned pipe engine. (Tuned pipe on a GHQ? Now there's a picture!) By installing a new conrod 0.165" longer than the original, the exhaust port timing is brought to a better range at 120-130 degrees without messing up the other

parts too much. The longer con rod also gives a higher compression ration, but the head must be carved out to clear the piston baffle at top dead centre. On my test engine, these changes jumped the rpm from 3500 to 5500 on the same prop and fuel. This is an increase of 388% in horsepower. The needle is still hard to set and the engine doesn't "2 cycle" cleanly, which may be due to the low piston baffle. Further mods might improve it, but I consider the test a success for the time being.

Disassembly: The GHQ has a unique system of retaining the cam to the crankshaft. A number 4/0 taper pin is driven through a reamed hole in the cam flange and through the crank. To remove this pin, first locate the small end. Looking down on the cam flat from the front of the engine, the small end is usually on the right hand side. Drive out the pin with a 3/32" dia. Drift punch from the small end, supporting the cam on a wood or soft metal block.

With the pin out, the cam should slip easily off the shaft. The timer is removed by loosening the pinch bolt or threaded arm (if so equipped) and slipping off forward. The massive timer which uses early Ford V8 points, is well made and usually offers no problems providing the pivot screw is not over-tightened and the insulator is in place on the spring anchor screw, which is also the "plus" electrical connection.

The cylinder head is retained by eight 4-36 x 1/4" screws. There is a thick head gasket (usually stuck).

The carburetor is retained by four 3-48 x 1/4" screws. The bypass cover uses 2 of these small screws. There are paper gaskets under both surfaces.

The cylinder is held in place by four 5-40 x 3/8" screws. Removing these should allow the cylinder to lift off. Again, there is a paper gasket at the base flange. Cylinder removal exposes the piston. The wrist pin is usually a loose push fit, but some of the cast iron piston engines have a fairly tight press fit. On those engines, the pin is best left in the piston. If removal is required, heat up the piston (Mono-Coat gun) and drift or press out the pin with the piston supported on a wood block.

Case halves are flanged together by four 4



-36 x 3/4" screws with nuts. Another paper gasket seals the flanges. With the rear cover removed, the rod will come out easily and the crank shaft can be removed to the rear, provided you have removed the cam.

Reassembly: As usual, reverse the process to assemble your engine, but there are some points to watch for.

There are several different cranks and rods for the GHQ, and they will not always interchange. Be sure everything fits.

The normal con rod is very soft cast brass. These can be bent or twisted quite easily. If your engine binds when you tighten the cylinder flange screws, the rod may be bent. By placing two properly sized twist drills (usually 5/16" or 9/32" and 7/32") through the holes in the con rod, it can be hand-straightened so that the drills line up in both planes, horizontal and vertical. Note that the wide side of the lower end of the con rod has a symmetrical lower end, but is offset at the top end, install so that the top of the rod is placed closer to the front of the engine. The object of all this is to get the piston as near the centre of the crankcase (front to rear) as possible.

There are several wrist pins. The brass ones don't need end pads, but the steel tubing pins should have pads unless they are a tight press fit into the piston.

The cylinder can be installed with the exhaust on either side of the engine. Be sure the piston baffle matches your choice of exhaust location; wide side to the exhaust. Some cylinder blocks have a raised ring machined on the flange base. This fits into a recess in the crankcase to align the cylinder. Blocks without this feature are aligned by the 4 base screws.

When installing the rear cover, note how the gasket fits at the cylinder flange connection; it must be flush. Also be sure the case-to-cylinder flange joint is flat.

Install the timer before installing the cam. The large side of the taper pin hole in the crank is usually in line with the crank pin at top dead centre position. The taper pin should go most of the way into the cam by hand. If it hangs up, give the crank a 1/2 turn, and try the other side. There are aluminium and steel cams. Steel is best as the aluminium is easily cracked when tightening the prop nut. Be sure the moving point pivots freely.



If you try to run your engine, remember it is a 0.51 cu. in. displacement, and prop accordingly. The original instructions recommend 2/1 gas/oil mixture and a 0.015 points gap with a 0.020" spark gap on the V (3/8") plug.

Direction of Rotation: There are a lot of tales about correct rotation on the GHQ. Here are the facts: It is a 3 port engine with no cylinder offset, so it can be run clockwise or counter-clockwise. Timer position is the determining factor. The early engines were set up to run clockwise. This is reflected in the instruction, and in the factory-cast aluminium prop which was left hand pitch for clockwise rotation

Parts: Other than timers and screws, I know of parts supply for the GHQ.

Repro Timers: Dave Wilke, P.O. Box 188, Idyllwild, CA 92549.

4-36 Screws: Wes Pettinger, 1501 Banbury Ct., Richardson, TX 75082.

Test Run: GHQ with re-fitted sheet metal piston and long taper needle valve.

Fuel: 2/1 gas/70wt. Oil, RevUp 12/6 prop, 3500 rpm.

Same Engine: Fitted with con rod 0.165" longer than standard and re-fitted head. Same fuel and prop: 5500 rpm.

Charlie Bruce.



The Story of Louis Paulhan's Ground-Breaking London-Manchester Flight In 1910

After being proposed by a national newspaper in 1906, it took four years for someone to claim the prize.

It has now been 112 years since Louis Paulhan conducted the first flight between London and Manchester. The French aviator conducted the feat on April 27th, 1910.



The rules were that there couldn't be more than two stops in 24 hours, and the take-off and landing points couldn't be more than 5 miles from the Daily Mail's offices in the two cities.

later but landed near Lichfield after engine troubles and couldn't continue his mission.

Paulhan took off four days after his competitor. He arrived in Manchester 12 hours after leaving London and spent four hours

Money up for Grabs.

Described as the greatest aviation event in 1910, Louis Paulhan faced off with Claude Grahame-White for a £10,000 (£1.2 million today) prize offered by the United Kingdom-based newspaper Daily Mail. The trip between the two English cities is just 185 miles, but such a flight had not been performed just yet.

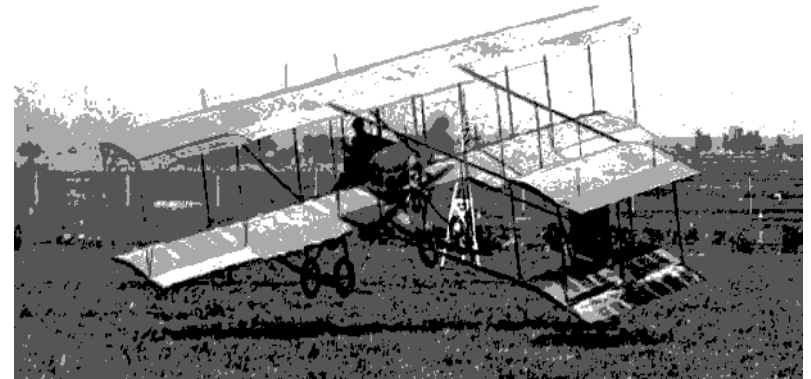
Grahame-White attempted the trip in a Farman biplane on April 23rd. He took off from Willesden Junction in London and flew 85 miles north to Rugby in a record-breaking two hours and five minutes. He departed for Crewe an hour

and 12 minutes in the air with just an overnight stop in Lichfield.

Overcoming Challenges.

In 1953, Air Science: v. 1. Introduction to AFROTC by United States Air Force ROTC shared the following about the London to Manchester feat.

"On April 27 Paulhan arrived at Hendon with a crated Farman biplane. The machine was quickly assembled, and at 5:30 in the evening of the day on which he arrived, Paulhan took off for Manchester. His mechanics, his wife, and a party of friends drove to Willesden, where there was a special train that was to guide the aviator on his way. The roof of the train had been whitewashed to make it more readily distinguishable from the air. An empty gas tank brought Paulhan down at Lichfield, where, in the dark, he made a dangerous but safe landing after a trip of 117 miles. In one hop he travelled as far as his rival had previously flown in two."



The Farman III (pictured in Los Angeles) landed in Disbury, Manchester after a single stop.

A Decorated Career.

Paulhan's accomplishments didn't start and end with this domestic British trip. He was a balloon pilot in the military and won a competition for model aircraft design. He soon became recognized as a skilled pilot and took part in several air shows across Europe. A year before the London to Manchester race, he performed the first official powered flight at Brooklands, Surrey. He even made a name across the pond, touring the United States after arriving with two Blériot aircraft and a pair of Farman biplanes.

Overall, the early 1910s were a notably pioneering period for British aviation. Just two years later, Denys Corbett Wilson became the first pilot to fly from Great Britain to Ireland. There would be plenty more accomplishments across the aviation scene in the years to come.

WHICH PROP IN LER ELECTRIC EVENTS?

SEFLI is an AMA-sanctioned model airplane club for Long Island Modellers interested in electric-powered flight. The club has attracted a number of engineers and scientists from the local aerospace industry. At almost every monthly meeting, there is at least one presentation on aerodynamics or other technical aspect of electric flight. Members report on research they have conducted. Some go well beyond the usual backyard testing. Recently a member presented a simple study of propellor efficiency. He had compared the static thrust produced by three propellers commonly used in Limited Engine Run (LER) SAM events to the thrust these same props produced in the 25 mph stream of air from a low speed wind tunnel. He estimated 25 mph is probably close to the flying speed of many of the models being flown in this event. A geared Astro 05 Cobalt (FAI I think) was used to drive the props.

Which prop was best? Well, like everything else, it all depends. The usual contestant's goal is to produce the maximum rate of climb. The three props tested differed widely in static thrust. One expensive imported folding prop was head and shoulders above the others. The 12x10 wood prop was by far the worst in terms of static thrust. The domestic folder was in between. In the 25 mph airstream they all produced almost exactly the same thrust. Current draw by the motors under load varied about 2 amps in the 30+ range.

The engineer who conducted the test suggested the imported folder could be expected to produce better initial acceleration and a higher rate of climb at lower air speeds. To perform optimally, the angle of climb would have to be very steep. The folding domestic prop couldn't match the other folders static thrust, but was at least its equal at 25 mph. The lesson here is to allow the model to fly a little faster by climbing at a less steep angle. Probably the biggest surprise was the 12x10 stock wood prop. The static thrust it produced was much less than either of the folders.

However, at 25 mph it produced the same level of thrust and promised to do better if suitably modified for this application. Not folding would be a major handicap in glider applications but not in SAM competition where folding is not permitted. How could the wood prop be improved? The blades could be sanded thinner. Off the shelf wood props in this range are usually engineered for use on powerful and vibrating .60-sized glow engines. Modellers have found that they can safely be sanded to remove maybe 25% of the blade thickness when used on geared 05 electric motors. To thin the prop blades, remove stock from the curved front surface of the blade.

Typically, this is where the manufacturer's name, etc., is stamped. A blade made thinner in this way will move through the air with less drag. However, sanding the curved front surface will reduce the camber, lift and the thrust produced by this rotating airfoil. You might want to sand the rear of the blade to a concave "under-cambered" shape to restore some of the lost camber and make the blade still thinner.

The presenter suggested which prop was best for you, depended on what and how you fly. If your piloting skills, motor output and the other capabilities of the model dictate a near vertical climb, you might do best with the prop producing the highest static thrust. However, he suggested most flyers would be more comfortable with a model flying faster at a less steep angle, because the increased rate of air flow over the model's control surfaces

would make it easier to fly. In any SAM LER event, the rate of climb, not the airspeed is the key. At what airspeed your model produces its maximum rate of climb is related to the thrust available.

These modifications will, of course, eliminate any stated or implied warranty and could produce a dangerous prop, so proceed very carefully and stay out of the arc of the prop. Whatever you do, don't use the modified prop on an internal combustion engine or even on a large direct drive electric motor. A blade thrown off at high speed is a dangerous missile.

Some years ago, Hal de Bolt published an article on how to modify a wood prop for electric motor use. He described how to sand and file blades thinner and, as I remember, spent some time on how to rework the hub. The hub on most wood props intended for glow engines are very inefficient. The blade is relatively thick, and has little or no effective airfoil shape for the first two or so inches from the area covered by the glow engine prop washer. He suggested this area be reshaped to continue the airfoil and blended into a smaller hub area. Props of this sort are appropriate for current SAM-legal Old Timer's LER events.

The typical power source is a smooth running 05 electric motor driving the prop through a reduction gear box. Depending on the battery, motor, gearbox and prop combination selected, the rpm is likely to be about 5,000. If you think about it a little, the challenge is simply to optimize the L/D ratio of the prop at the motor's most efficient rpm. Effectiveness is measured by how high the model gets in the time allowed. Simple enough until you think about it a little more. First, the battery is a steadily declining source of power. Second, the model must accelerate from zero to flying speed to get off the ground. Third, the flyer must provide ever-changing control inputs which cause the model to climb at the maximum rate throughout the flight. The airspeed may change continuously. Finally, the CD may reduce the engine run time in the fly-off if there are ties. You could probably use more pitch to take advantage of the shorter motor run in the fly-off. And then there is the prop breakage problem. Your hand-carved, carefully tested masterpiece is much more fragile than the stock item. I'll bet a few modellers have been tempted to wick-in a little Zapp to repair a clean break of a prized prop. The many long broken interlocking fibres pushed into alignment provide something that is a cross between a finger and scarf joint. It might be strong enough at 5,000 rpm, but who knows? I don't think I'd tempt fate!!!

An engineer working in research for a major aerospace company, who was in the audience agreed most props could be made more efficient by using a spinner to cover the hub area. He suggested a blunt spinner would be the most effective at the airspeeds we anticipate. The reason a spinner makes a prop more efficient goes something like this: In the hub area, the prop is producing little thrust and a great deal of turbulence. He noted this disturbed air migrates out along the prop blade and reduces the thrust produced as it does so. The spinner allows the outer part of the prop blades, where most of the thrust is produced, to operate in cleaner air. It didn't come up, but maybe a "MOG" style fence across the blade would help too.

Someone asked if spinners were SAM-legal for competition. SAM rules seem to be silent on this point. However, AMA safety rules require a spinner or safety nut.

Most SAM events are AMA sanctioned. It seems logical to assume that SAM rules would allow or require a modeller to comply with AMA safety requirements in this respect. Maybe we can get one of the experts in SAM competition or the AMA to respond to this question. Larry Davidson is sure that spinners are allowed. By the way, at the low gliding speeds we use, a spinner isn't likely to do much to reduce drag.

THE LAST PAGE



The End Of The Earth

The Nullarbor Cliffs *literally* feel like the end of the earth, though they are really just the end of Australia.