

# AVANZ



# NEWS

**Fostering Vintage and Traditional Aeromodelling in New Zealand # 189**





# Committee Notices



## #189 CONTENTS

- Committee Notices
- Coming Events
- Past Events
- The Cover
- Hydromodels
- Go-Go 1966
- Automatic Connectors
- Hedy Lamarr
- The Challenger* 1941
- Shigeo Ogawa
- Arup* 1936
- Three Questions
- Sporty*
- Mike's Messy Model
- The Sgt.Major
- Records
- Tailpiece

Your Committee has started using Zoom to hold monthly meetings, enabling prompt attention to administrative matters.

At the March meeting, an anomaly in the Vintage FF Duration rules, as noted by a flier of this event, was discussed.

Engine capacity in Vintage Free Flight Power events is restricted to a maximum engine capacity calculated as "0.1 cu.in per 225 Sq in of wing area". It has been pointed out that in some cases, this limit prevents the use of engines that were used on the original model and are specified on its plan.

For example, Russell Peers Classic Woodpecker design from the mid-60's used an Eta 29 in a model of 564 square inches. Later, Peers bravely used a .40 K&B in a Woodpecker of

the same wing area. Under the current rule, the maximum engine capacity for this wing area is .25 cu in, ruling out the engines used by the designer.

A modern .25 engine may provide power equal to or even greater than the engine on the plan, but wouldn't power plants that were used by the designer be more authentic?

The insertion of the **red text**, right, to Power Loading rules for Vintage Power (7.2.5), Nostalgia Power (8.1.4), and Classical Power (9.1.4) would allow the use of engines that were on the original plan or were used by the designer on that design.

*In addition to Rule 6.2.4 maximum engine capacity is further limited to 0.1cu in per 225 sq in of wing area, calculated using Rule 6.1.5.*

*If an engine that is on the original plan, or can be shown to have been used by the designer for that design, exceeds this power loading limit, the use of that specific engine is permitted. This exemption applies only to the engine(s) shown on the plan or used by the designer, and does not allow the substitution of other engines of the same capacity as that shown on the plan.*

*For the purposes of power loading, Vintage Ignition, Vintage Diesel, and Four Stroke motors are rated at 60% of their nominal capacity.*

If feed-back is favourable, this modification to power loading rules will be presented as a rule-change remit to be voted on. Please forward comment to the Editor.

**SIG CHAIRMAN** Don Mossop [donmossop@gmail.com](mailto:donmossop@gmail.com)  
**SIG SECRETARY** Don Mossop [donmossop@gmail.com](mailto:donmossop@gmail.com)  
**AVANZ Plans** Mark Venter [avanz.plans@xtra.cvz](mailto:avanz.plans@xtra.cvz)  
**COMMITTEE** Wayne Cartwright [rwcartwright4@gmail.com](mailto:rwcartwright4@gmail.com)  
 Peter Townsend [petert2@outlook.co.nz](mailto:petert2@outlook.co.nz)  
 Tony Gribble [agrib@orcon.net.nz](mailto:agrib@orcon.net.nz)

**TREASURER** Jan Butcher [jjbutcher@xtra.co.nz](mailto:jjbutcher@xtra.co.nz)  
**AVANZ News** Bernard Scott [scott.scott@xtra.co.nz](mailto:scott.scott@xtra.co.nz)  
**MFNZ COLUMN** W Cartwright and D Crook [chloecat@xtra.co.nz](mailto:chloecat@xtra.co.nz)  
 Barrie Russell [barrierussell@xtra.co.nz](mailto:barrierussell@xtra.co.nz) Allan Knox [allan.j.knox@gmail.com](mailto:allan.j.knox@gmail.com)  
 Bryan Treloar [bryan\\_treloar@hotmail.com](mailto:bryan_treloar@hotmail.com) Warner Summerton [gsumm@gmail.com](mailto:gsumm@gmail.com)

# Committee Notices continued

## **CONTEST DIRECTORS** for the 2023 Nationals.

The Committee has received a rescue offer that would handle the Cd'ing of Vintage Free Flight at the next Nationals. The offer arises from the lack of volunteer CDs that resulted in VFF events being cancelled last year and comes from the Free Flight Special Interest Group which uses the same flying area as Vintage Free Flight.

While this offer is much appreciated, and will be taken up if necessary, it would do much to preserve the autonomy (and dignity) of VFF if we could handle our own affairs without having to be bailed out by another Special Interest Group.

For this to happen, we need volunteers to cover four flying days. As was made clear last year, the job need not fall on one person - splitting it between up to four volunteers can be done.

Early notice of the next Nationals gives dates of 1<sup>st</sup> to 6<sup>th</sup> January, 2023. The four VFF days are likely to be the 2<sup>nd</sup> to 5<sup>th</sup> January.

Planning for the Nationals will begin shortly, so if you wish to help, please advise the Editor within the next ten days.

## **MANAGING COVID RISK at Vintage rallies**

### *Prior:*

A vaccine pass will be required to attend - both flyers and visitors

Do not attend if feeling unwell

*On arrival at flying site:* Report to the CD and show your Vaccine pass

Use hand sanitiser at the CD station

Record your name on flyer/visitor record

### *During the rally:*

Maintain a reasonable separation throughout

Use hand sanitiser regularly

Inform the CD if there are actions occurring that you believe place others at risk

### *After the rally:*

If you develop COVID symptoms within days of attending the rally, please notify the CD

# Coming Events

**April 9 - 10**

**Thames Blackfeet, Ngatea**

Contact: Martin Evans

[martinevansnz@gmail.com](mailto:martinevansnz@gmail.com)

**April 23 - 24**

**Nth Shore MAC**

North Shore Model Aero Club, 60 Green Road, Dairy Flat, Auckland. We will comply with the Government's criteria of the day. Currently we are requiring vaccine passports for our events that could have an attendance between 25 and 100.

Contact: Robert Berger or David Wilkins  
021.513.075

**May 21 - 22**

**Tuakau MAC**

Contact: John Butcher

[jjbutcher@xtra.co.nz](mailto:jjbutcher@xtra.co.nz)



**With the ever-changing Covid situation, it would be wise to check with the contact person whether the event is still being held.**

# April, May, June 2022 Vintage and Free Flight NATIONAL DECENTRALISED PROGRAMME



Apr/22	118	VINT	FF Nostalgia 1/2A/ Min Replica
Apr/22	119	VINT	FF Classic Power Duration
Apr/22	120	VINT	RC Vintage 1/2E Texaco
Apr/22	121	VINT	RC Vintage A Texaco
Apr/22	122	VINT	RC Vintage E Texaco
Apr/22	221	FF	1/2 A Power
Apr/22	222	FF	Open Rubber
Apr/22	223	FF	Open Power
Apr/22	224	FF	Coupe d'Hiver
Apr/22	225	FF	P30
Apr/22	226	FF	A1 Glider
Apr/22	227	FF	Kiwi Power
Apr/22	228	FF	Open Glider
Apr/22	229	FF	Catapult Launched Glider
Apr/22	230	FF	Hand Lanced Glider
Apr/22	231	FF	E36
Apr/22	232	FF	FAI F1L Indoor Rubber

May/22	123	VINT	FF Vintage Precision
May/22	124	VINT	FF Vintage Power Duration
May/22	125	VINT	FF Nostalgia Rubber Duration
May/22	126	VINT	RC Vintage and Classical Scale Texaco
May/22	127	VINT	RC Vintage Open Texaco
May/22	233	FF	Open Rubber
May/22	234	FF	1/2A Power
May/22	235	FF	Kiwi Power
May/22	236	FF	Open Glider
May/22	237	FF	FAI F1L Indoor Rubber
May/22	238	FF	Coupe d'Hiver

Jun/22	128	VINT	FF Vintage Hand Launch Glider
Jun/22	129	VINT	FF Vintage Catapult Glider
Jun/22	130	VINT	FF Nostalgia Power Duration
Jun/22	131	VINT	FF Classic Rubber Duration
Jun/22	132	VINT	RC Vintage Precision
Jun/22	133	VINT	RC Vintage E Duration
Jun/22	239	FF	Hangar Rat
Jun/22	240	FF	Indoor Hand Launch Glider
Jun/22	241	FF	A1 Glider
Jun/22	242	FF	P30
Jun/22	243	FF	FAI F1A Glider
Jun/22	244	FF	FAI F1B Rubber

# WAIKATO FREE FLIGHT CHAMPS

SATURDAY 30th April 2022

PROCTOR ROAD, ORINI 8.00am start Fly-offs 2.00pm

Entry point to field will be marked with a yellow sign

Close any gates that you open

CD Bernard Scott scott.scott@xtra.co.nz

Field Levy \$5

AGGREGATE	11:30 - 12:00 am
OPEN	3 x 180 (Power, Rubber, Glider)
KIWI POWER	3 x 120
CAT	6 x 60
E-36	3 x 120
MINI Combined	3 x 120 (P-30, Coupe d'Hiver, 1/2A, A1)



All but one of the events at this year's Waikato Champs can use Vintage designs, and even E36 has seen a converted Miniature Replica *Stratostreak*.

Vintage designs are popular in Aggegae. Photographs show three from last year's Aggregate event. Richard Fallas *Tomboy*, Bryce Gibson *Ebenezer*, and Bernard Scott's *Tomboy*.

# Nationals Open Rubber

1st - David Ackery (no photo available)

Right:  
Antony Korben  
2<sup>nd</sup> Open Rubber  
*Lanzo Stick* 1940



Far Right:  
Bryce Gibson  
3<sup>rd</sup> Open Rubber  
*Tubestake IV*



Right:  
Bernard Scott  
4<sup>th</sup> Open Rubber  
*Bo Jess*



Far Right:  
Graham Lovejoy  
5<sup>th</sup> Open Rubber  
*Urchin* 1960



# Wayne Lightfoot's Nationals



WAYNE campaigned Nostalgia and Classical designs in rubber events.

*Top Left:* 1964 *Miser* designed by John Malkin. Built by Brian Roots and used by him in the 1965 World Champs. Restored by Wayne.

*Bottom Left:* 1958 *Specialist*, Joe Bilgri.

*Middle:* 1950 Cd'H designed by Etienvre, used in Mini Combined

*Right:* Even small rubber models need a lot of tack - background legs optional.



A quiet moment, for some, at the Nationals

AGGREGATE



# HOW ABOUT A SOLID STICK MODEL?

By W. A. DEAN

## FULL SIZE WORKING PLANS OVERLEAF

HERE is a stick model that is really different. Only sheet balsa is used and unlike most stick jobs the general lines are quite graceful. Construction is very simple and the model should not take the average modeller more than four or five evenings to complete.

The plans are drawn full size so just lay some transparent paper over them and trace the various parts off.

The fuselage stick is made in two pieces from  $\frac{1}{4}$  in. sheet to save wood and also to have the grain running the way we want it.

The wing mount is covered pretty well by the plan, but perhaps a few words regarding it may be helpful. Two soft pieces of  $\frac{1}{16}$  in. sheet are cut to shape and three pieces of  $\frac{1}{8}$  in. sheet sandwiched between them so as to leave a recess into which a tongue can fit. This is sanded to a streamline shape after cementing in position. The fuselage may now be also sanded to the indicated section and the tail hook bound in place.

Many stick models rely on a piece of bent metal for a propeller bearing, but this is not a very satisfactory method. With the type of stick on this model, bushes may be used in the ordinary way as with a nose block.

The airscrew is made from fairly soft balsa, white tissue being doped on when completed.

The freewheel arrangement is of quite conventional design and should not give you any trouble either when building or flying.

Next construct the undercarriage using one piece of wire. Make the "U"-shaped piece which fits over the fuselage slightly smaller than a  $\frac{1}{4}$  in. Cut a shallow slot in the fuselage at the attachment point so that the "U" piece fits snugly in position. Apply plenty of cement at this point so as to make a rigid fixing.

The wing is made in two halves, each side being propped up when cementing, to give a dihedral angle of 2 in. The  $\frac{1}{8}$  in. sheet tongue is first cemented in place and then two pins pushed through the wing to form an additional support. The joints should be well covered with cement and then three strips of  $\frac{1}{8}$  in. wide tissue doped along each one.

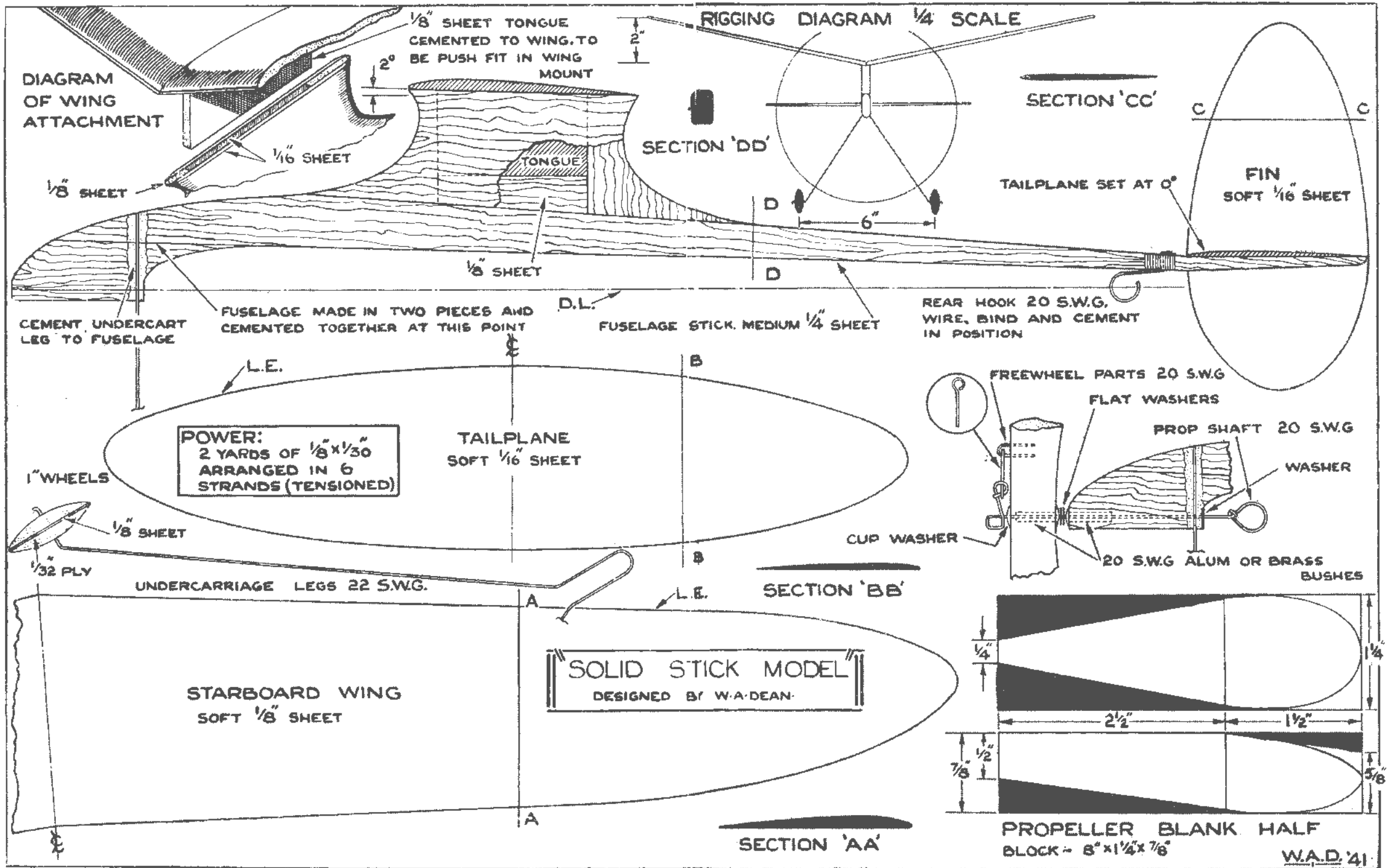
The tailplane is made in one piece and cemented to the fuselage. Check carefully with the wing for alignment, then cut out the two pieces forming the fin, fix in position using a set square to check the angles so formed with the tailplane.

In order to protect the flying surfaces from hard knocks, strips of  $\frac{1}{8}$  in. wide tissue may be doped along the leading edges of these members if desired. For protection from handling and moisture the fuselage can be given a couple of coats of banana oil, although care should be taken that this does not add too much weight as even one coat is surprisingly heavy.

Lastly, the rubber motor is arranged in a rope—a small ring fitted to the rear end—and attached to the model. The point of balance should be about an inch behind the leading edge, but don't be worried if this is slightly different on your job, as the flying surfaces can be warped to obtain flying trim. If, however, the propeller used is on the light side and consequently your model balances somewhere near the T.E., there is nothing for it but to shift the wing mount back.

Choose a fairly calm day for the initial flights—try a few hand launches from shoulder level until a long flat glide is obtained—then give a few turns and R.O.G. As you get to understand the model increase the turns until the limit is reached. As all modellers know—"the limit" is the turn before the one on which your rubber breaks!

The rubber should be stretch-wound from the rear by means of the ring provided. Be sure to lubricate the motor well after every half-dozen flights or so.





Are you sure there isn't room for me to get on board ?

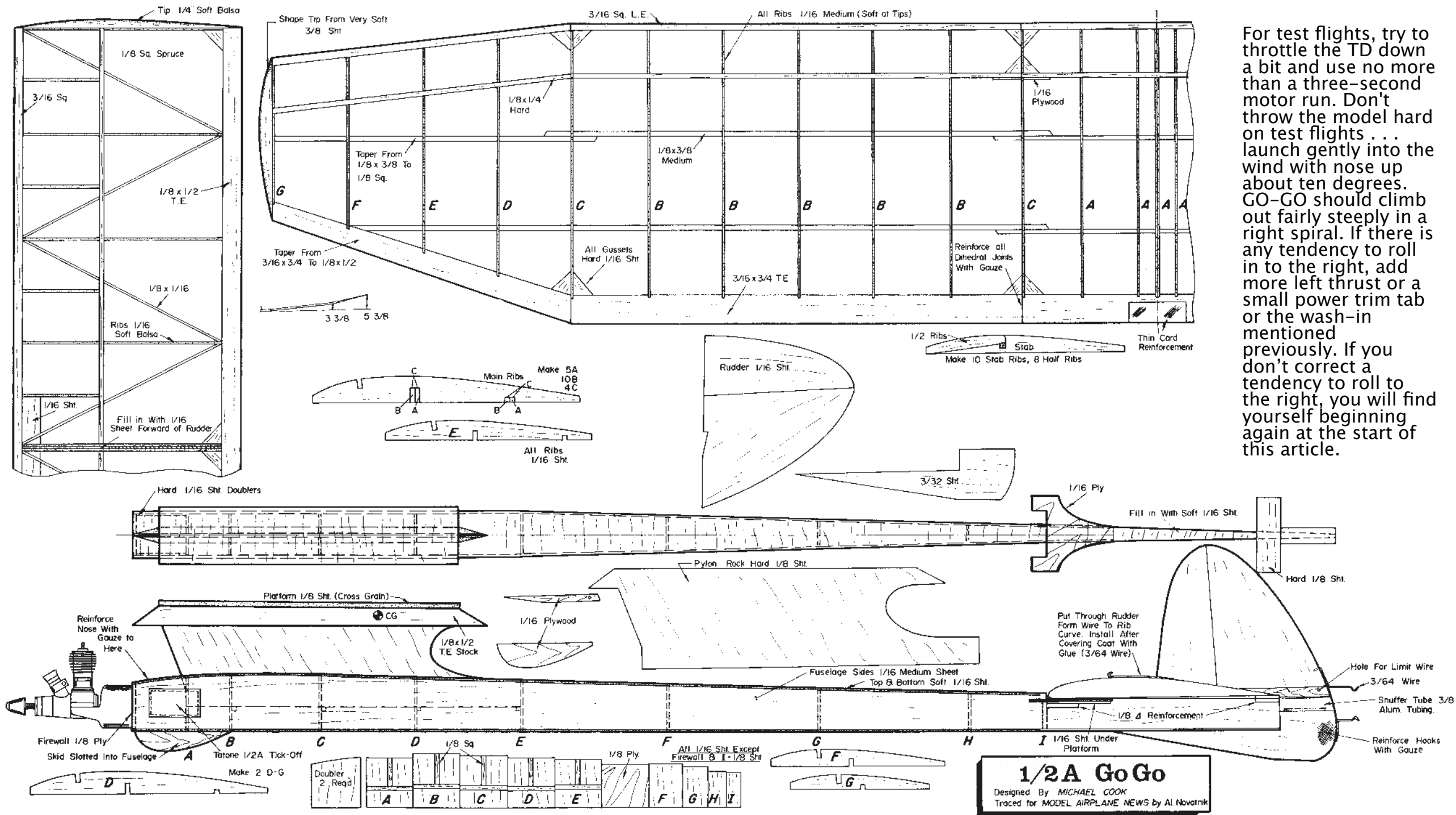
Bloody clowns. At least one of them could have brought oars !

Hydro models - the perfect ruse ! Now, if we can just slip past the Gibraltar patrols, we'll be into Europe

Just my luck ... next to the nose picker

Cork  
Cardi  
N  
ic  
n  
to  
GAL  
no  
SP  
Sevilla  
M  
All  
Rabat  
Casablanca  
MOROCCO  
Marrakesh  
0  
propetrovsk  
Rosto  
tsk  
RU  
Krasnodar  
Mayk  
GEORGI  
AR  
Yer  
URKEY  
Aleppo  
ms  
ON  
SYRIA  
amascus  
Amman  
RDAN  
SAUDI  
ARABI

# From MAN April 1966, a candidate for Classic Power or Classic Combined



For test flights, try to throttle the TD down a bit and use no more than a three-second motor run. Don't throw the model hard on test flights . . . launch gently into the wind with nose up about ten degrees. GO-GO should climb out fairly steeply in a right spiral. If there is any tendency to roll in to the right, add more left thrust or a small power trim tab or the wash-in mentioned previously. If you don't correct a tendency to roll to the right, you will find yourself beginning again at the start of this article.

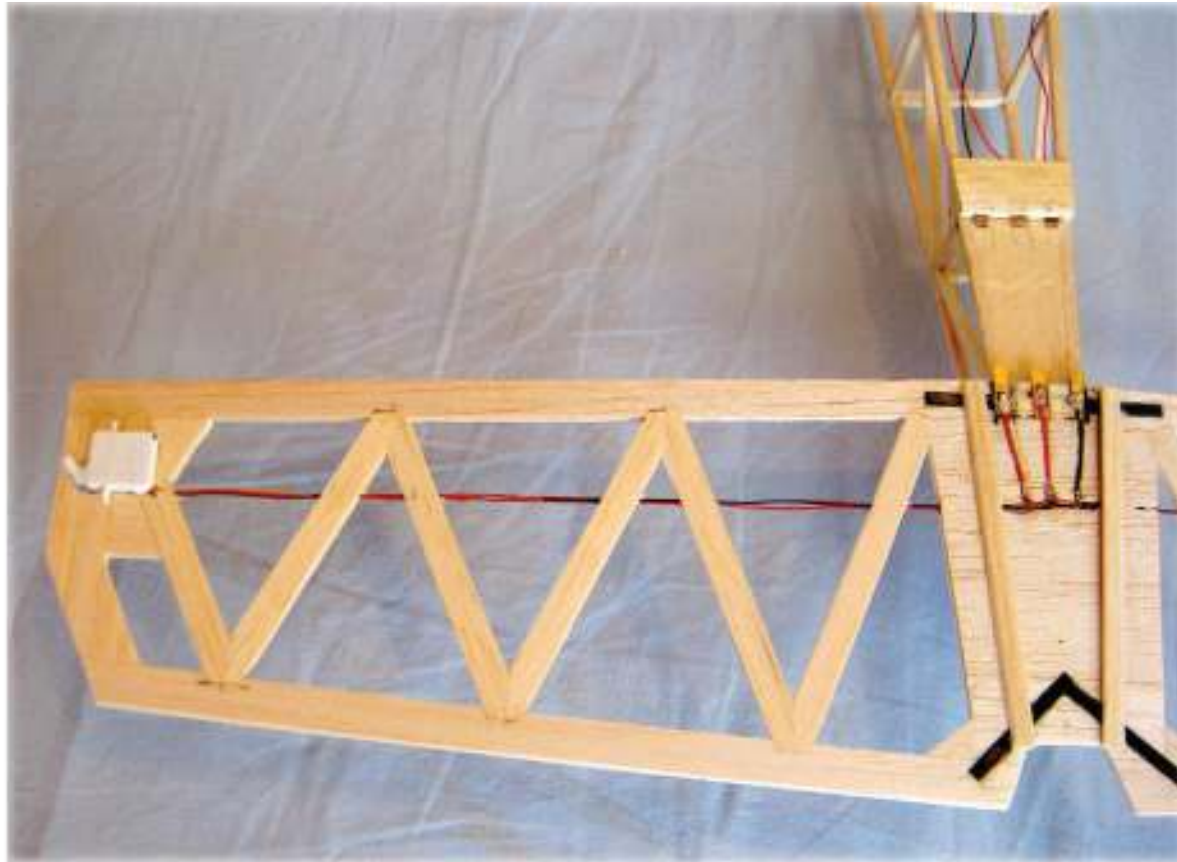
**1/2A Go Go**  
 Designed By MICHAEL COOK  
 Traced for MODEL AIRPLANE NEWS by Al Novatnik

Automatic servo connection  
in Dayle Montgomery's  
1946 Keil Kraft *Competitor*.



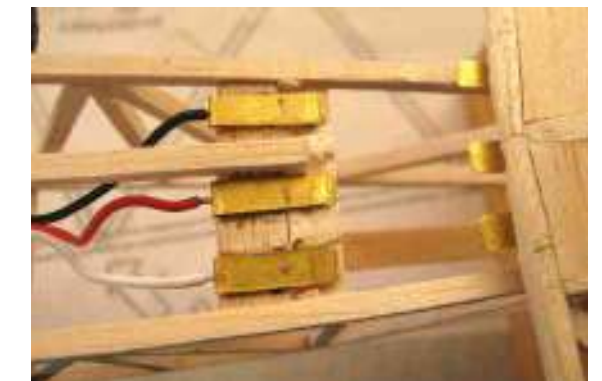
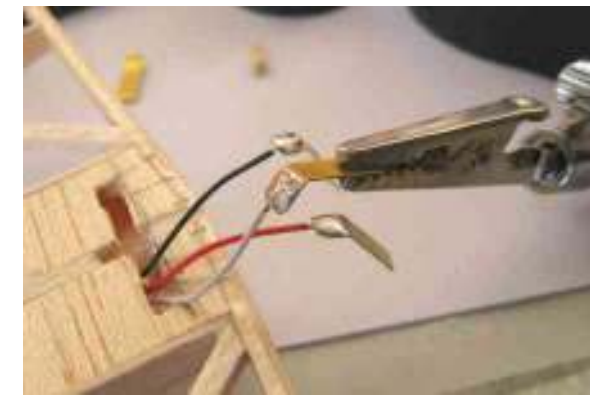
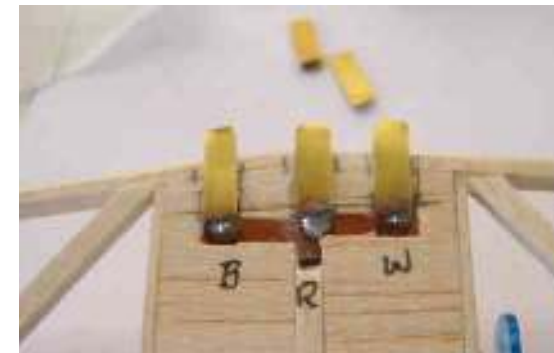
# Automatic Servo Connectors

Dayle Montgomery



**Above** Uncovered Nomad tailplane reveals the plug-and-play system of servo connection that Dayle calls the “Fork and spade” method.

**Right** Stages in making the connectors.





Its fuel exhausted, the Nomad's nose was pushed down to prevent a stall and was centered on the rough runway, long deserted and now sprouting weeds in the cracks between its concrete slabs. But Dayle could see that vegetation would not be the only obstacle ... a herd of camels was nonchalantly ambling into the Nomad's line of silent descent !



# HEDY LAMARR

## Co-inventor of frequency-hopping radio transmission

Better known for her silver screen exploits, Austrian actress Hedy Lamarr (born Hedwig Eva Maria Kiesler) became a pioneer in the field of wireless communications following her emigration to the United States. The international beauty icon, along with co-inventor and composer George Anthiel, conceived a secret communications system to help combat the Nazis in World War II.

By manipulating radio frequencies at irregular intervals between transmission and reception, the invention formed an unbreakable code to prevent radio frequency communications from being intercepted or jammed.

Lamarr and Anthiel received a patent in 1941 but it was shelved by the military until long after the war was over. The significance of their invention was not realized until decades later when, during the Cold War, it was resurrected and put into practice for military communications. It was used on naval ships during the Cuban Missile Crisis and subsequently emerged in numerous military applications. By then the original patent had expired and she and Anthiel never received any compensation for their invention which is estimated today to be worth hundreds of billions of dollars.

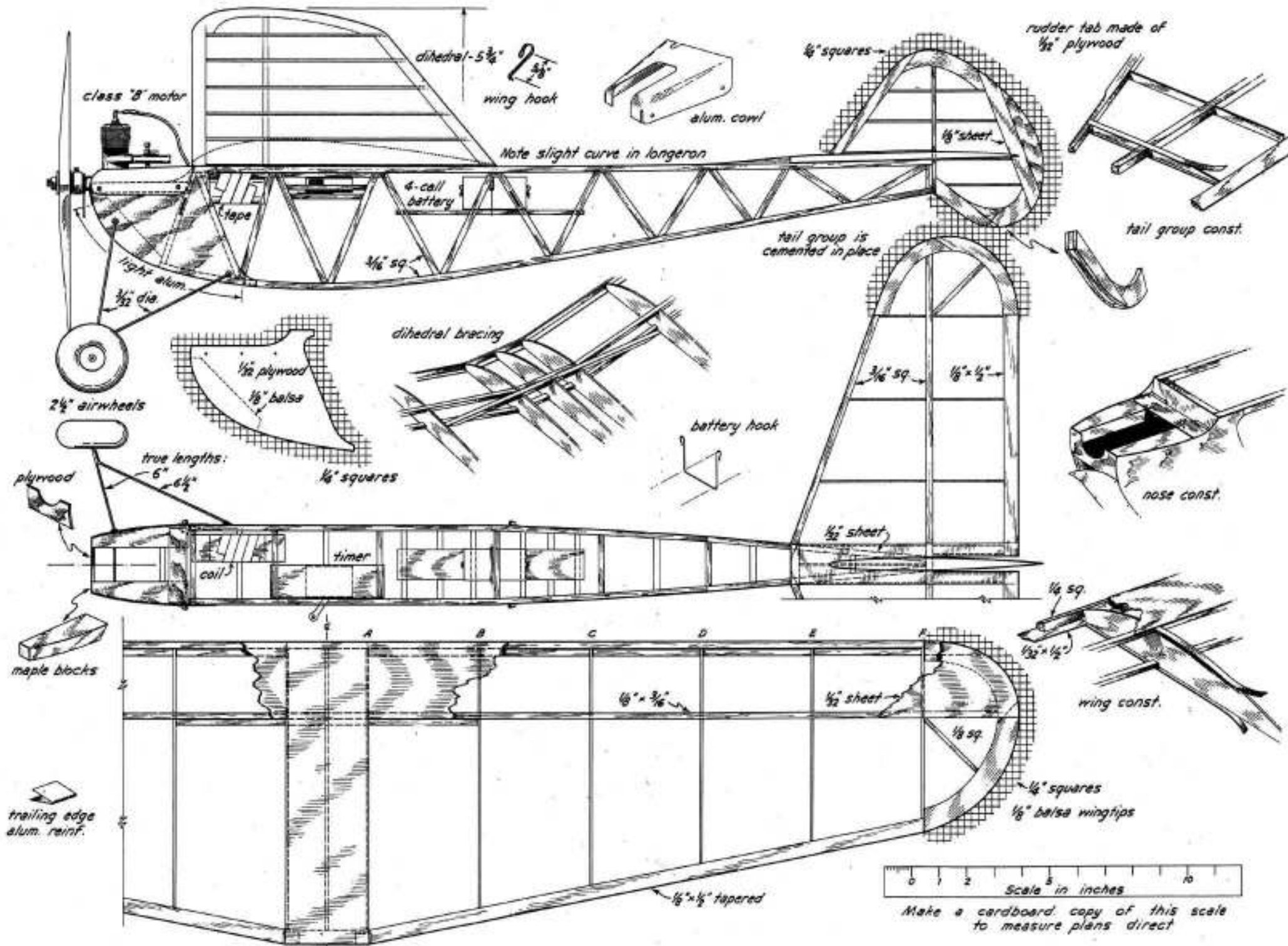
The "spread spectrum" technology that Lamarr helped to invent would galvanize the digital communications boom, forming the technical backbone that makes cellular phones, Blue Tooth, WIFI, and other wireless operations possible.



# The Challenger

H. A. Thomas  
Air Trails May 1941

Built by HA's sister and flown by her to such effect that it was claimed "Out in Little Rock the fair sex is mopping up contests"



# MODEL ENGINE PIONEER

Tony Farnan

Shigeo Ogawa, the founder of O.S. Engines Mfg. Co. Pty., died at his home in Osaka, Japan, on November 4th, 1991. Thus ended the life of a creative engineering genius who spent 55 years designing and perfecting his range of model engines.

Long before he died he had the satisfaction of realising that his company had become the largest producer of miniature piston engines in the world, and the longest established.

His life story, from an early age, was the pursuit of excellence. He had a fascination for creative design and always sought the ultimate in precision. His aim always was to produce ... the best in the world.

After being born in Tajimi City in Japan in 1917, he was adopted by the Ogawa family at the age of three. His adopted father was a building engineer and this perhaps had some influence on his early life. It was a small local hobby shop near his home which assisted Shigeo Ogawa to commence building models at around the age of 12. The shop provided space and equipment for customers to work on their hobby projects. In 1931 he began a three year project to construct a steam locomotive which eventually won the top award at a Japanese Students' Scientific Model Exhibition. Even at the age of 15, his talent for precise workmanship was evident.

In 1936, his mother loaned him the money to purchase a small lathe which was installed in his first 20 square metre 'factory'. At that time an American toy and hobby buyer, Mr. Paul Houghton, visited Mr. Ogawa and suggested that he should make model gasoline engines.

This was the turning point of his career, and 300 pieces of the first O.S. Type-1 engine were shipped abroad under the name of "Pixie". This was quickly followed by the Type-2 and the Type-3. The business, although small in size, was steadily progressing.

In 1940, the O.S. Type-6 was completed and, with the growth of model aeroplane flying in Japan, the engine dominated competition results at that time.

In September 1943, Shigeo Ogawa was drafted into the Japanese army and was sent to the south-east Asian sphere of operations. He was in Bangkok when the war finally ended in August 1945. On returning to Osaka in May 1946, he was shocked to find the city virtually devastated

through bombing raids. Although his house had been burnt down, his family was safe and his small factory ... survived.

In the post war years, model aviation in Japan blossomed through participation by American servicemen in the various events. At that time the OS Type-10 and Type-11 were released and, in April 1950, Mr. Ogawa flew the first jet model plane in Japan.

In the same year he released his first B Class engine called the O.S. New 29. This was an immediate success, winning almost every competition held in Japan at the time.

O.S. engines were exported for the first time in 1950, to the first international agent, Radar Company of Hong Kong.

The Australian market followed next, when Tony Farnan chanced to test an O.S. New 29 which he found to be virtually as good as his K&B Torpedo 29 which was the favoured competition Class B motor. The Ogawa Company's second agency, O.S. Distributors (Aust.) Pty. Ltd., was formed in 1953 and, almost immediately, the first 'MAX' series engines were released. First there was the MAX-1 29, followed by the MAX-1 35 in 1954, and the MAX-1 15 in 1955. This latter motor won the Free Flight World Championships in 1956 in the hands of Ron Draper of England, and modellers throughout the world suddenly realised that the expanding range of Japanese O.S. motors were potential world beaters.

1955 to 1965 was the decade during which the O.S. increasing engine range became well established in all major international markets, which eventually led to their recognition as the world leaders. Radio control also made great progress during that decade, from single channel to multi channel equipment. The introduction of transistors in 1959 helped to miniaturise model RC gear, and O.S. commenced manufacturing all transistor Tx series in the early 1960s. Rapid technological advances in the U.S. as well as in the rest of the world led to the age of analogue proportional control systems from around 1965, and then on to digital proportional control equipment.

Mr. Ogawa had personally initiated the design and development of O.S. radio control gear; however, with the number of large electronic industries entering the RC market, he decided that the O.S. Company should concentrate on its specialised sphere of model engine manu-

# O.S.



Mr. Shigeo Ogawa

facturing.

In 1967, the O.S. Company signed an agreement to manufacture and market a rotary engine for model use. The contract was with Graupner of Germany, who were licencees for NSU/Wankel. Mr. Ogawa and his R&D team overcame many technical difficulties to complete the engine developments in a little over one year. On October 18, 1968, the first model aeroplane flown by a prototype O.S. Wankel rotary engine was flown in Japan. Within two years the engine was introduced to the world market. The motor received widespread attention and international acclaim, and still remains as the only model rotary motor in production anywhere in the world.

Mr. Ogawa's next project was the development of a 4-stroke engine. He felt that an increasing drawback to the popularity of 2-stroke motors was the high pitched exhaust noise which he thought could be eliminated by designing a 4-stroke motor. By effectively applying accumulated model engineering knowledge and skill, the O.S. Company succeeded in developing the world's first 4-stroke engine without much difficulty. The engine was satisfactorily tested in

March 1975, and put into production the following year under the name of O.S. FS-60. This initiative commenced a trend for 4-stroke motors which has been taken up by other model engine makers and is increasing nowadays.

Looking back, the Japanese model industry totally has made great progress, due in no small way to the leadership shown by Shigeo Ogawa. In 1967 he was elected Chairman of the newly established JEM (Japan Engine Model Industry Association). He held this position for 10 years.

Throughout this period O.S. were continuing to design and release outstanding engines eagerly accepted by modellers around the world. In 1974, the first Schnuerle-ported engine was introduced. This was the MAX-60 FSR which was quickly followed by the MAX-40 FSR which itself became a tremendous favourite in all countries.

On September 20, 1984, on Japanese Aviation Day, Mr. Ogawa was greatly honoured by being awarded the Paul Tissandier Diploma, the highest award given by the FAI to people who have made a significant contribution to progress in the aeronautical field. An excerpt from a magazine article of the time reads ... "Mr. Ogawa has contributed greatly to the development of model engines since the initial establishment of Ogawa Sciesakusho Company in 1936. His engines are highly praised throughout the world. Furthermore, Mr. Ogawa has played an important role

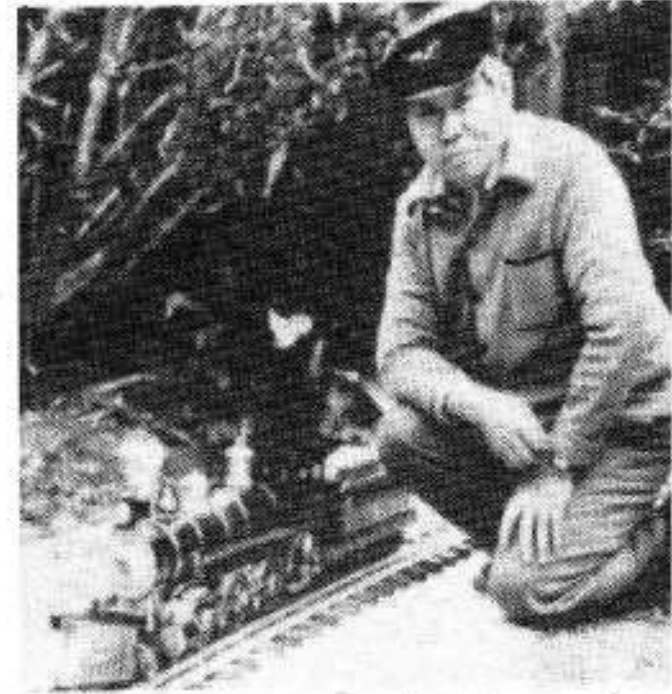
in aiding the Japanese as well as the world model industry".

The Paul Tissandier Diploma was established to commemorate the achievement of Paul Tissandier, who served as a Director of the FAI from 1905 to 1965. The award is truly the highest honour for those who devoted their lives to the aeronautical field in various ways.

Not only did Mr. Ogawa produce superb model aeroplane engines, but he also spent much of his time designing and making miniature live steam locomotives which immediately became famous for their precision, performance and exact scale detailing. One of the O.S. locomotives recently completed 100,000 miles hauling children around a fun fair on top of the roof of a Tokyo department store.

It is not often that one person can have an influence on countless thousands of people in most countries of the world. Shigeo Ogawa managed to do this. Most modellers throughout the world at some time have owned one or more O.S. engines.

Even though he is no longer with us, his ... "tradition of excellence" will continue. The O.S. Company over recent years has been run by a team of specialists, each responsible for production, administration, design and so on, and these experts, who have been with O.S. individually for more than 20 years, will continue to uphold the standards set by their famous founder.



Mr. Ogawas passion was live steam engines

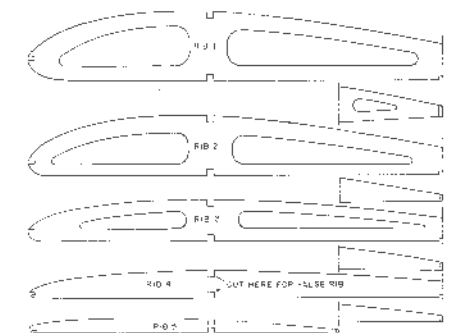
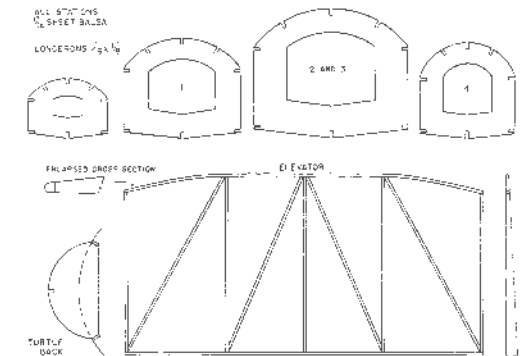
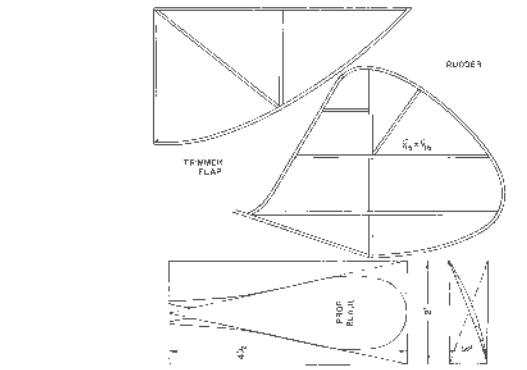
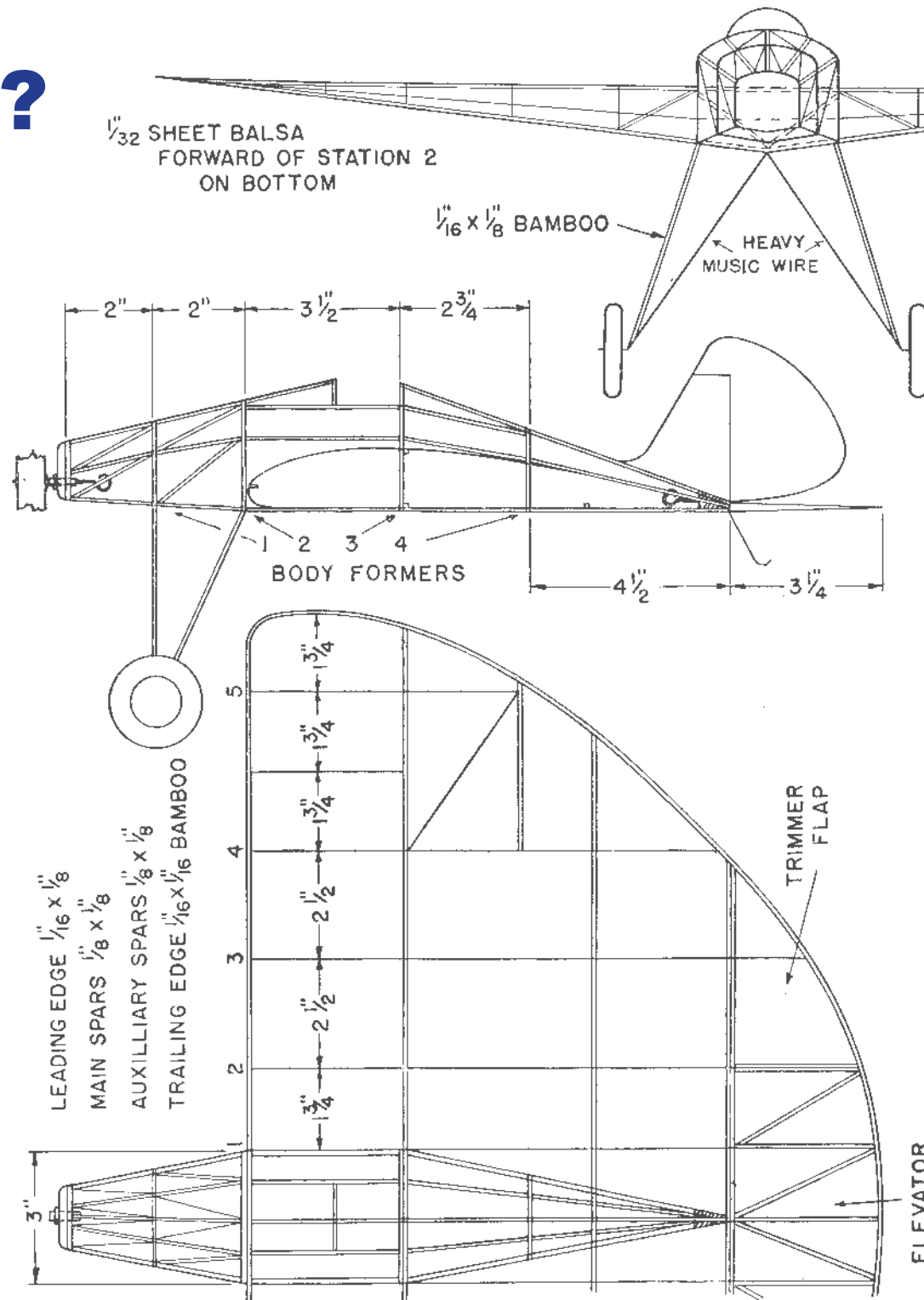
# SCALE TEXACO ?

*Arup*

**FULL SIZE:** 1933 Cloyd Snyder  
**MODEL:** 1936 Gordon Englehart



Large trailing edge control surfaces were mixed for pitch and roll control. In the S-2 version, above, roll was boosted by movable, semi-circular wingtips.



# Three Questions

[1] Member of the British Union of Fascists in the 1930's and inducted into the International Air and Space Hall of Fame in 1980. He was ... ?



[2] Charles Rolls, he of Rolls Royce fame and founder of the Piercing Gaze Society for Young Gentlemen, made aeronautical history in what manner?



"He's been saving this balsa for years. About once a month he slides back the closet door and stares at it reverently for a minute or so."

[3] Don't we all?

*Answers last page*



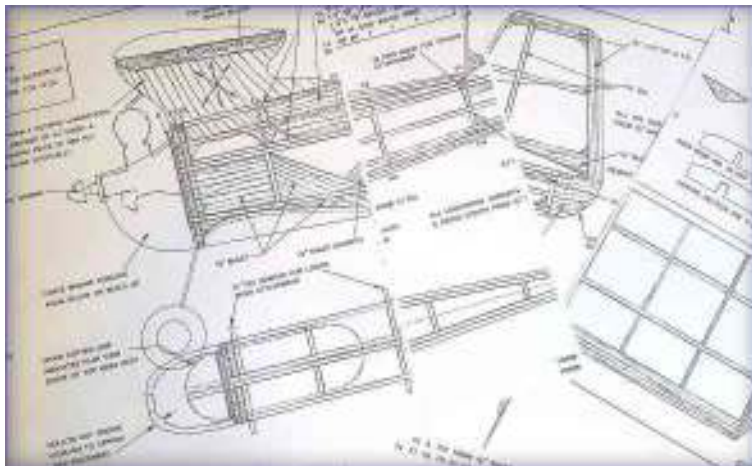
# AVANZ News goes Sporty!

**Richard Fallas, NSMAC**

Your Editor does a pretty good job of tugging at the heart strings. Old things that resonate. “Sporty” on the last edition cover does that for me in spades. “Love to build that...” But wait, there are at least six, make that twelve, other models in the queue already – not another one! Yeah, but maybe it would make a good little article for the next edition of AVANZ News if I share the journey to making an old model by using new technology (laser cutting a short kit) in an analogue sort of way?

A trip to Outerzone and the plan pdf was found. Opened that in Adobe and printed it on my Epson A3 inkjet in poster format/draft quality to save ink. Voilà!

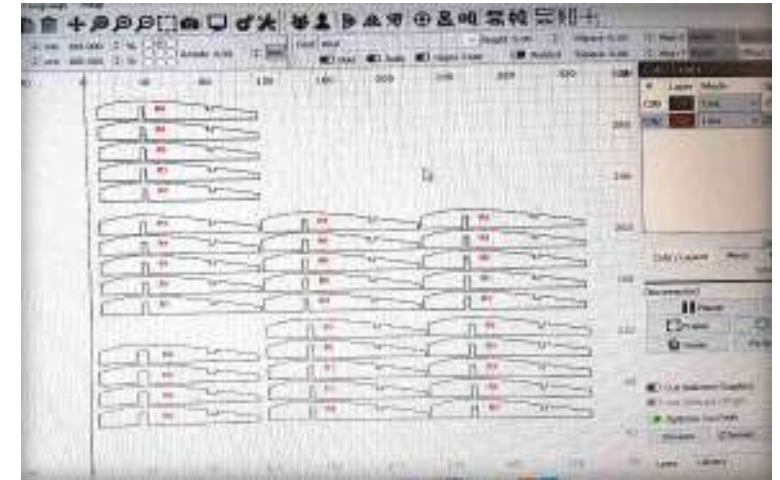
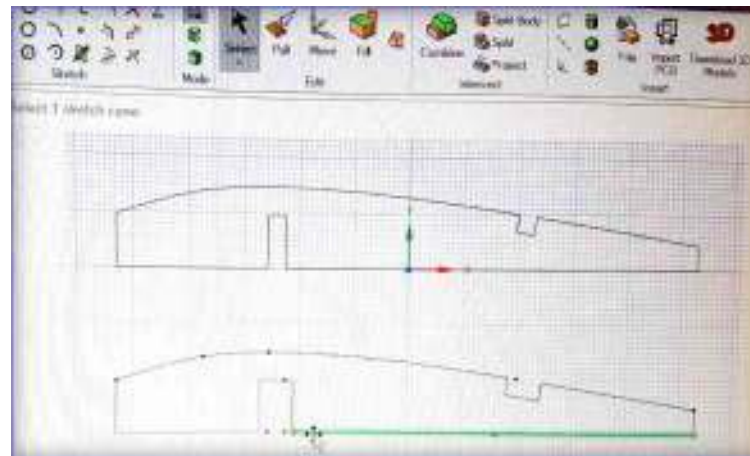
## Plan sheets from Outerzone



Now the old-fashioned way to go modern. I could take the time to trace it in the software but experience has shown that to be quite slow and for a simple model like this there are only a few key parts. Whoops, a quick count suggests about 24 separate images with some used several times. Maybe 30 with tips, etc. It would be easier to scale these from the plan and re-enter them into CAD, getting better control over dimensions this way. (Actual tally of all parts was nearer 100 with about 40 repeats!)

Entered a set of measured points for Rib 1 into DesignSpark Mechanical, my preferred CAD tool, and copied that for Rib 2. A bit of editing of slots then export as a DXF into Lightburn which drives the laser. LB makes quick work of adding labels then creating multiple copies. Check out the two screen photos below of these stages. Time so far, 45 minutes from the start.

## Ribs entered into DesignSpark



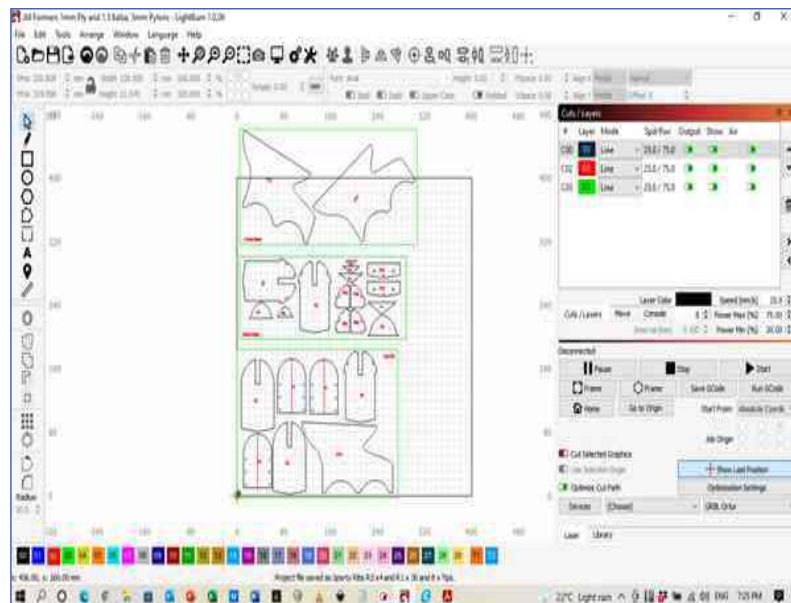
## Ribs duplicated

Back after a quick lunchtime adjournment and now for the wing tips and the fuselage pieces.

I worked through the wet afternoon and did a bit more of the same with the fuselage parts. Here they all are in groups ready to be laser cut on different thickness sheets.

I'll need to get some 1mm ply for this, but am also laminating some of the 3.2mm parts in 1.5mm balsa in two pieces for economy. The pylon parts are quite awkward to get the grain orientation correct so I had to play around with join lines to get a suitable sized panel for 3.2mm cheeks. Here is where I had got to by dinner time, to add to the wing parts above .....

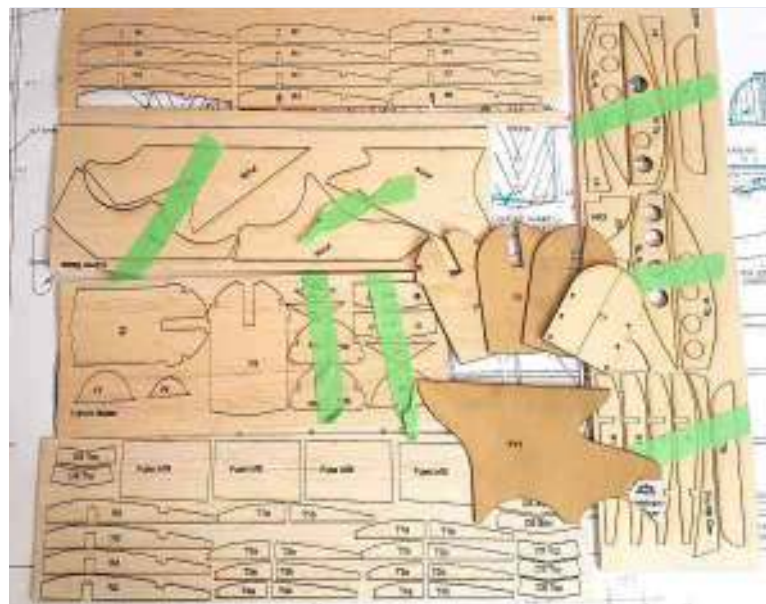
## Fuselage parts, will be split prior to cutting



In total, I probably spent about four hours to find and print the drawing, measure and capture the majority of the parts in CAD and lay them out for laser cutting. Not ultra-fast as I had a few false trails, but this stuff does take time. The screen shot above gives some good detail of what Lightburn offers on its Interface. There is quite a bit to learn. As with most software, the common tools are learned quickly and obscure ones may never be mastered. Now for some cutting!

The photos nearby are from the end of the process. Slightly over two days start to finish, with maybe half that doing other things. That said, its worth repeating - this stuff does take time. Of course next time would be quicker, but not instantaneous. Issues along the way included re-discovering that birch ply is a pig to cut on the laser, even 1mm stock. The glue seems resistant. After persisting with many passes I eventually called a halt and cut the last 0.5mm by hand. Other plywood is fine.

## Pretty well all the parts cut out in 1.5, 3.2mm balsa and 1, 3.2mm ply.



As you can see, some parts have dropped out showing a clear cut. Others require slight bit of help with a sharp knife as the grain was harder in spots. It's a trade-off of number of passes for all to be clear cut vs just enough.

Also, I had my usual whoopsies in not quite placing panels in the right place and some went over the edge. All in all though, a success. Plus, I learned a few techniques. For example there is a neat "offset" tool just as in AutoCAD... but I have discovered that it will offset multiple lines at once – a new one to me. That came up while delving into another "problem" and going further than I needed to. This system makes very accurate parts and if designed cleverly they can be self-jigging. I decided to create bespoke spars with cut-outs for ribs to ensure accurate spacing, as well as scalloping the upper surface and aligning the ends to match the dihedral braces. The little pairs of "slot lines" were copied along using the offset tool.

## Fancy bespoke wing spars in hard 3.2mm balsa.



Now, a bit of spreading the good word. Here are two sets of parts – the bagged up set could be heading your way if you turn up at the Waikato FF Champs on 30<sup>th</sup> April. I will build the other set "one day". Maybe in time to take to England on the possible trip there in June?

## Two complete kitsets!



I hope this has been of interest and follows on from my article in December's issue of Model Flying World. Sporty would make a great little free flight or radio assist model - and Vintage qualifying of course! It was new to me so thanks to Bernard for his inclusion in AVANZ news and particularly the great cover.

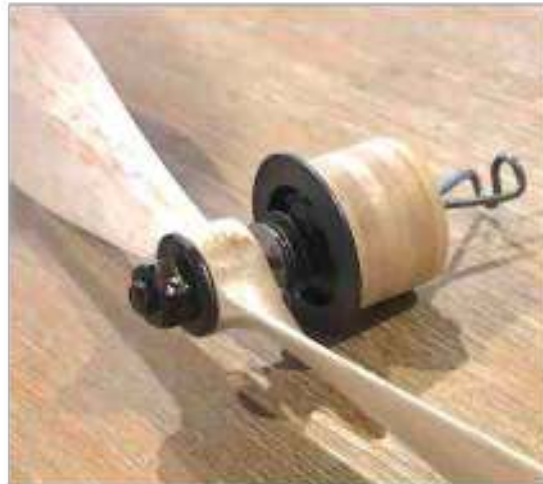
Richard



# CROSS DRESSING MODELS

After a full morning's flying, that petrol engine can leave a mess on the model. A thorough clean-up job is required for this one ... or is it?

Mike Mulholland's begrimed model is a clever deception. It is rubber powered with imitation engine and exhaust residue. Built for an event promoted on Hip Pocket Aeronautics for models using a power source different to that on the original.

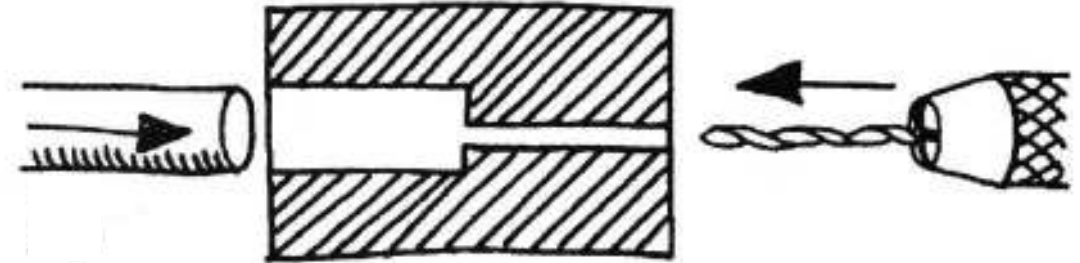


# THE SGT MAJ

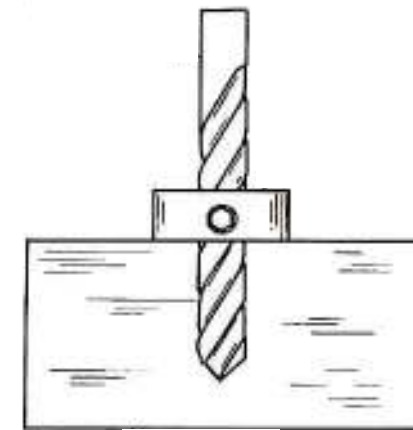
**EROMODELLIN? .... EROMODELLIN? SO YOU FINK YOOD BARVER BE EROMODELLING THAN DRILLIN HUP AND DARN TH' SQUARE WIF ME? AWL REET THEN, AVE I GOT SOME TIPS ON DRILLIN FOR YOU, M'LAD ...**



**WAIT FOR IT .... CENTRE DRILL YOR DOWLING LIKE THIS**



**HAND ... .. ERE'S OW TO NOT DRILL TOO MUCH, THO I RECONS THERE'S NO SUCH THING AS TOO MUCH DRILLIN**





### Precision Records

**Vintage Precision**                    **1194**  
*Allan Knox 2021*

**Classical Precision**                **599**  
*Allan Knox 2021*

### Duration Records

**Vintage IC Duration**                **1671**  
*Stew Cox 2019*

**Vintage E Duration**                **1560**  
*Brian Harris 2018*

**Classical IC Duration**              **1500**  
*David Thornley 2017*

**Classical E Duration**              **2700**  
*Peter Townsend 2021*

### Texaco Records

**Vintage 1/2A Texaco**                **3333**  
*Allan Knox 2018*

**Vintage A Texaco**                    **3730**  
*Allan Knox 2018*

**Vintage Open Texaco**               **3543**  
*Bryan Treloar 2018*

**Vintage 1/2E Texaco**                **3957**  
*Allan Knox 2021*

**Classical 1/2E Texaco**              **3266**  
*Allan Knox 2021*

**Vintage E Texaco**                    **3000**  
*Allan Knox 2020*

**Vintage E Rubber Texaco**        **7988**  
*Peter Townsend 2021*

**Sport Cabin Texaco IC**               **1646**  
*Sean McCurrie 2021*

**Sport Cabin Texaco E**               **4456**  
*Keith Trillo 2019*

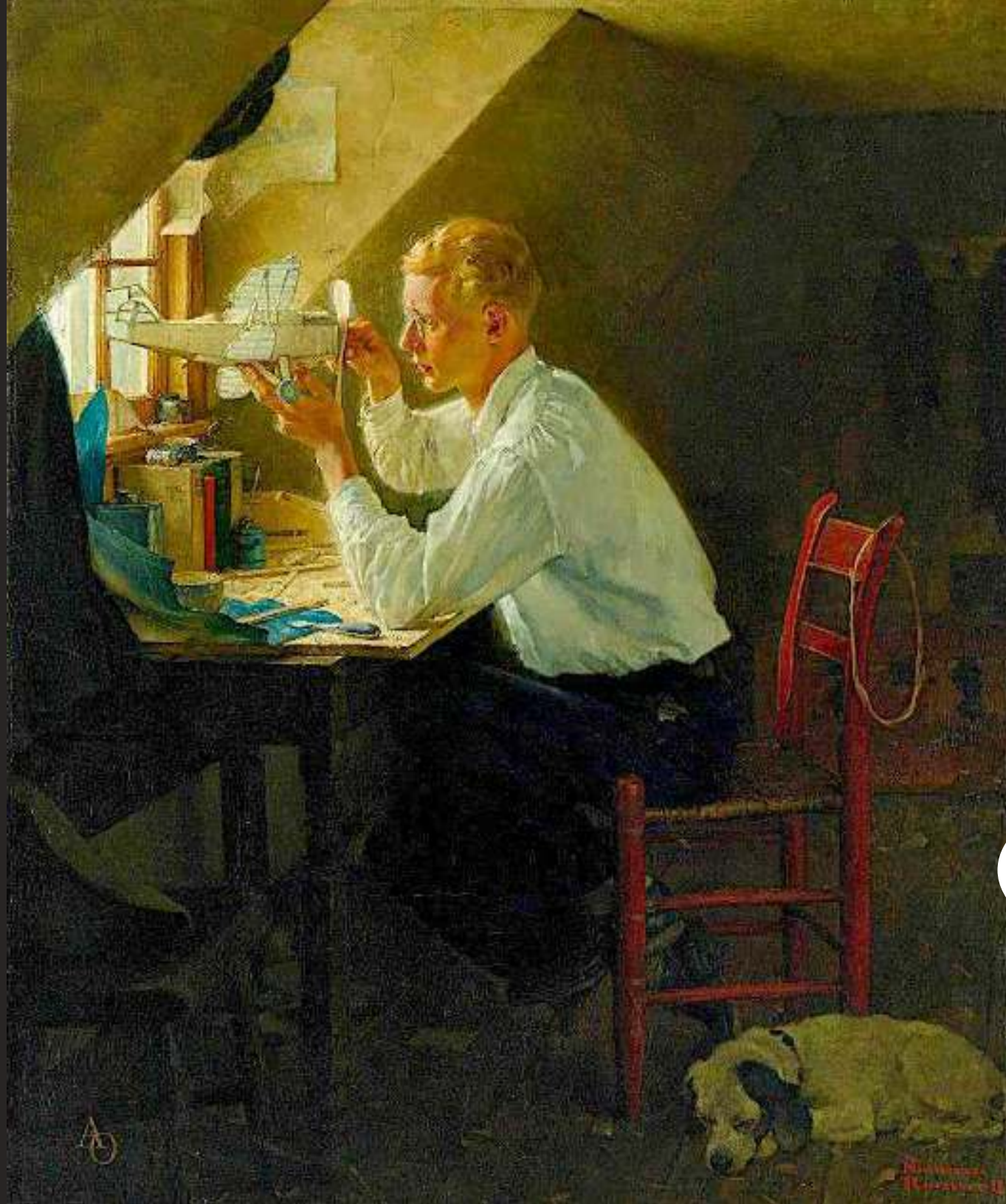
**Vintage and Classical Scale Texaco**  
*Allan Knox 2020*                    **2466**

## Answers

[1] Alliott Verdon Roe of AVRO Aircraft Company.

[2] In 1910, when aged 32, Mr Roll's Wright Flyer shed its tail in flight. His death was a British first that was to dissuade one Thelma Higgins (Mrs), of 47B Broad Lane, Upperthong HD9, from flying until 22<sup>nd</sup> July 1957.

[3] Yes, of course.



Never no bleedin  
walkies no bleedin more  
now 'es a bleedin  
aeromodeller