

Model News

AUSTRALIAN and NEW ZEALAND MODELLING

Oct. — Nov.
1965

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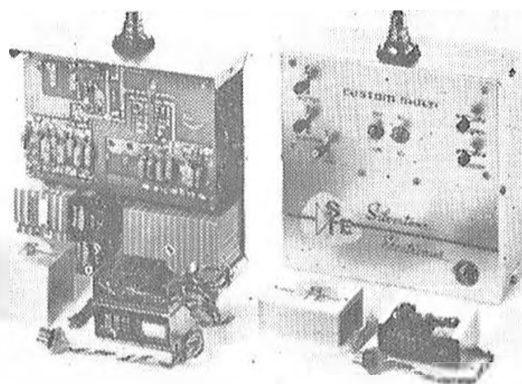
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WORLD RADIO CONTROL REPORT ★
24-HOUR SLOT CAR RACE ★

2/6

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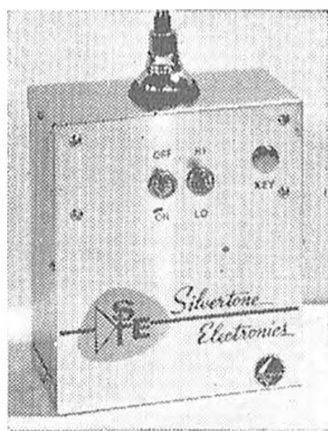
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McCoy	.19 R/C
McCoy	.35 R/C

McCoy	.19 Stunt
McCoy	.35 Stunt

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Veco Air Trap Wheels, 2½"
Veco Air Trap Wheels, 3"
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Veco Papoose	32"	

(Recommend engine .19)

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MODEL NEWS

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NEXT ISSUE DECEMBER-JANUARY

Editorial deadline 1st of month prior to month of issue.
Advertising deadline 25th of month prior to month of issue.

COVER STORY

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News and Views

Rule Changes for 19th Nationals

The following rules changes, events and procedures will be in force at the coming 19th Australian Nation Model Aircraft Championships. These are to be read in conjunction with the current M.A.A. of A. Rules Book.

OPEN COMBAT: Total flight time 4 minutes.
F.A.I. COMBAT: To F.A.I. rules.

JUNIOR COMBAT: As per Open Combat with the following alterations:—

1. Max. Motor capacity 2.5 cc.
2. Line length 50' plus or minus 1".
3. Line diameter .012" standard steel lines.
4. Seniors or Juniors may act as mechanics or helpers.

F.A.I. TEAM RACE: All contestants must provide cross sectional area templates at processing.

SCALE F/F, R/C, C/L: Models must be handed in for processing and judging immediately after they have completed a qualifying flight.

F/F SCALE: 10 Bonus points will be awarded for each additional motor.

CLASS I & CLASS III POWER DURATION: (Class I 1 — 1.0 cc. capacity; Class III 1.01 to 1) cc. max. capacity) Total motor run for 5 flights shall be 35 seconds. A motor run in excess of 10 seconds or any less figure which brings the total to more than 35 seconds shall constitute an attempt. Each contestant shall be allowed two attempts to complete each flight. The highest aggregate shall decide the winner. In the event of two contestants achieving five maximums there shall be a sixth flight with the motor run reduced to six seconds. In the event of any further tie the motor run will be progressively reduced by one second until the tie is broken. There shall be only one attempt for the sixth and subsequent flights. There shall be no minimum motor run. It shall be an attempt when the model flies for less than 20 seconds. After four flights the competitor may use all the time remaining for motor run even if this figure exceeds ten seconds.

POWER SCRAMBLE: All contestants in Power Scramble must present themselves on the field with a Time Keeper, Sweep Second hand watch and pencil by 2.30 p.m. A Le Mans start will be used. Max. engine capacity .099 cub. ins. Models must R.O.G.

JETEX: Maximum duration 2 minutes.

And a Protest

The Editor,
Model News,
Dear Sir,

I am interested in discovering by what right the organizing committee for the 19th Nationals may change the rules for events at that particular national championships. The Rules Book I possess, current for the period July 1st 1964 to June 30th 1966 claims certain rules official for the period in question. It may be that I am illiterate but that certainly reads as though changes cannot be made until mid 1966.

As an example rule 3, 5, 3, 11 states — referring to scrambles.—

"All models will be hand launched, the modeller standing on the ground".

Yet the first bulletin of the Nationals Committee stipulates R.O.G. as a basic requirement. Passing over the pointlessness and childishness of this restriction, surely it is an unacceptable change since it is contrary to the MAAA rules book it is supposed to be read in conjunction with. Similarly rule changes peculiar to this N.S.W. venue are proposed in Open and Junior Combat, F/F scale, Jetex, and the Power Duration Events.

Basically, I do not care whether these rule changes are an improvement or not, they should be mooted at the right place for 1966 not 1965. Does this mean that the National's Conferences which formulate these rules are a needless, time consuming farce? If any state is able to gerrymander its own rules the M.A.A.A. is dead, stone dead, and I do not want to see such a death. We want Juniors in our movement and for many reasons they are not attracted. Yet as we grow older we merely attempt to hedge this movement with more and more pettyfogging restrictions. This smells of the personal politics that are hamstringing Australian aeromodelling. Perhaps it is appropriate that the Nationals are being held in Canberra.

I must admit this is a somewhat tardy plea for constitutionalism since changes in the previous Nats. schedule evidently created a precedent. They were accepted too easily. Perhaps too many of us have the antiquated habit of wanting to fly and of leaving the regulations to the bushlawyers present in our sport.

All I ask is an answer to my question — Has the M.A.A.A. been made defunct with its rule making capacity taken over by individual state federations necessarily biased towards their own members,—

So I remain, yours faithfully

BARRY DENT.

Dear Sir,

With reference to the article 'T/R Fliers Reject Silencer's which appeared in the July/August '65 issue I desire to offer the following:—

1. As President of the Eastern Suburbs Model Aero Club I led a delegation to the local City Council in an endeavour to obtain the use of parks in the city for model flying after a ban of many years.
2. Following a demonstration of the effectiveness of silencers the Council has permitted limited use of fields subject to review if complaints of noise are received.
3. In view of the success of this approach, and a complaint from the O.I.C. Moorabbin Airport regarding the effect of noise on Tower transmissions, it was recommended to the V.M.A.A. that silencers be made mandatory.
4. This recommendation was accepted and became law in Victoria.
5. Experience has shown that the original law as passed was inequitable in its application. As a result of this a further motion was submitted to the V.M.A.A. as follows:—
"That the previous motion move by this Club, and the V.M.A.A. Rule arising therefrom be revoked and that the following become law in the State of Victoria:—Effective silencers shall be fitted to all model aircraft fitted with Pulse-jet Glo-Plug engined of 2.25 cc. and above or Diesel engines above 2.75 cc. when flown at Moorabbin Airport, in Public parks and such other places where their non-fitting might create a noise nuisance, provided that such models may be flown without silencers where prior approval of the Local Government Authorities has been obtained."

This motion was carried without dissent.

6. From this it will be seen that the rule now applying is equitable and has had the effect that those fliers who are most affected are now seeking a flying field where they can be as noisy as they like while at the same time being able to retain the existing fields at the expense of fitting an effective silencer.

It is an interesting comment that many of our Radio Control fliers, who operate in an area where a twin pulse-jet would be unheard are fitting silencers by choice.

In order that there might be no confusion as to my stand in this matter, I must state that what was done, and my part in it, was done before my appointment to the position which I now hold and in which I am at the direction of all members through their State Associations.

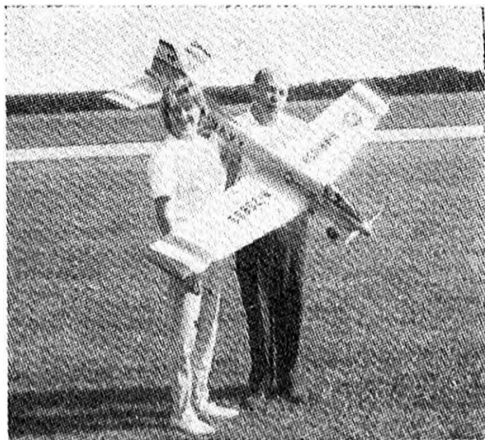
Yours faithfully,

A. J. LIVINGSTON, Hon. Federal Secretary.

**PREPARE NOW
for the
19th NATIONALS**

1965 World Championship for Radio-Controlled Model Aircraft, August 12, 13, 14 at R.S.A.F., Ljungbyhed, Sweden.

Reported by Alan Turton



Doc. Brooke and wife Jean (U.S.A.) after the winning flight. Model is his famous **CRUSADER**

The trip really started when my posting to England came through whilst I was at No. 1 Central Reserve, RAAF, Penrith. Since I was coming to the UK to undergo a series of courses connected with explosive engineering it was touch and go whether I would be able to take leave to coincide with the championships, fortunately August was left clear. Next problem was getting to Sweden; I had not fully realized that Sweden was 1,000 miles from our part of England and that, since August is summer holiday time here it is necessary to book car ferry passages some four to six months in advance. Fortunately these details were sorted out and with family (wife and 2 children) we set course at 2 a.m. on Friday, 6th August. We allowed four days to drive, paying a call on Windy Kruein in Rotterdam — spent an enjoyable couple of hours discussing radio equipment — particularly proportional — and then on via Copenhagen where I looked through a rather large toy/hobby shop — occupied three stories of shop space.

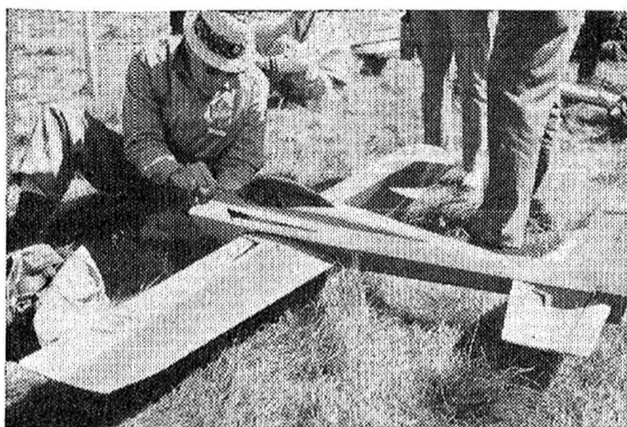
We arrived in Sweden on Wednesday 11th and called at the Reception Office where the organisation was immediately apparent. Programmes, diagrams of airfield and accommodation were available. We had private accommodation with a Swedish family (obtained for us by Ed. Johnson) and were soon settled in, so went down to the flying field to watch practice flying. To see the models lined up in the hangar, with a whole cupboard of multi TXs — mainly proportional — was a modeller's delight. At a rough estimate at Australian prices there was about £20,000 of radio and modelling equipment.

The competition started promptly at 7.00 a.m. next morning Thursday 12th. The first contestant was away on his flight at two minutes after. Early contestants were Ralph Brooke and Chris Tuewen. The day was calm and cloudless and augured well for a good competition. The Swedes had been most anxious as they had had bad weather for almost a month preceding the meeting. However the weather had cleared and was destined to remain as near perfect as could be desired. Each day dawned calm and clear then as the temperature rose, some fair weather cumulus appeared and a breeze to about 10 m.p.h. would start. In my opinion, the decision that the same order of flying would be maintained was unfair to some contestants — those flying early in the calm were favoured in flying such manouvres as the concentric loops, straight and level etc. This was subsequently shown by the results — Brooke and Teuwen were both early fliers. This could be splitting hairs, but then the differences in the best flights were hairbreadth anyway.

At the end of the first round the order was Weirick/Teuwen/Brooke/Olsen. Thus in the first four were two Americans — it was often said that they had a 200 ft. advantage before they started, psychologically of course. The surprise of this round was the flying of Chris Tuewen of Belgium, although he had flown



Peter Waters' "ALTAIR". The latest model in the contest. Featured a 22% wing section thick fin and tail. Engine Simmlenced Min-X radio gear. Merco 61 powered with twin plug head.



H. Thoms, from Canada. Flew well.

very well at Genk two years previously. Another surprise was the relatively poor showing by Fritz Bosch. Personally I felt that the best performance was by Chris Olsen of Britain, flying his own design "Upset", using reed equipment. Although flying in the middle of the day under gusty conditions (thermal) the perfect trim and stability of his model, combined with his smooth pulsing, made it difficult to detect his use of reeds. Another highlight was the flight by Chapman of Canada, flying his "Golden Hawk" model with retractable gear. The first round went smoothly and finished early in the afternoon so the starting time was altered to 8.00 a.m. for the succeeding rounds to give contestants and officials more sleeping time. The second round proceeded as smoothly as the first and at the conclusion of the day it could be seen that the final round would be very close. Teuwen (13,384) and Brooke (13,159) were the close leaders, but closely followed by Weirick, Stephansen (Norway) and Olsen. Highlight of the second round was the tailslide by Weirick — his model "Candy" fell about 15 ft. on its tail, finally falling forward in a correct recovery. This model was



Cliff Weiricks, of the U.S.A. Cliff's model "CANDY" featured a fiber glass fuselage and was the heaviest model at the Championships

the heaviest of the competition, exceeding even Chapmans with retractable gear. Weirick was using a pre-production Veco 61 reportedly the highest power R/C 61 engine to date.

The final round produced a large crowd of spectators. Ralph Brooke flew a very good round earning many rounds of applause from the crowd but fortunately missed his tailslide. When Chris Teuwen made his flight — to enthusiastic applause by a rather partisan audience (regardless of the quality of the manoeuvre) — and managed the tailslide most people thought he had it won. I am sure there were many disappointed Belgians when the score went up showing Ralph Brooke to be the new champion — for the second consecutive time. Subsequent flights were rather an anti-climax with minor placings and team scores being at stake.

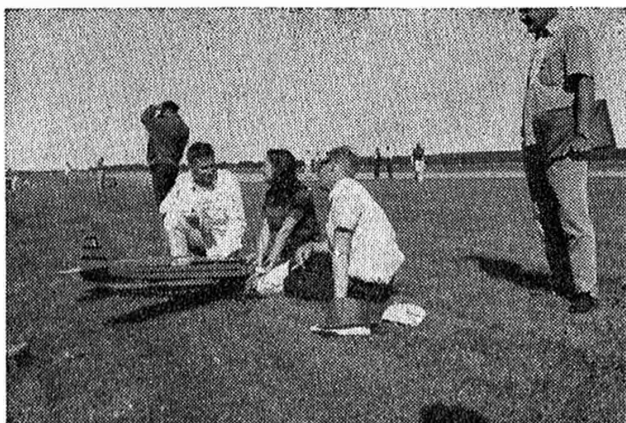
The superiority of proportional over reeds was very quickly apparent. The smoothness of manoeuvres considerably enhances the quality of a flight. The reliability of both types of R/C equipment and engines as well was demonstrated by the fact that every modeller flew on schedule for all three rounds. Also there were no crashes during the competition. Several contestants failed to complete their flights due to engine failure, mainly during the tail slide or spinning manoeuvres.



S. Kato, of Japan, with his Crusader type model.

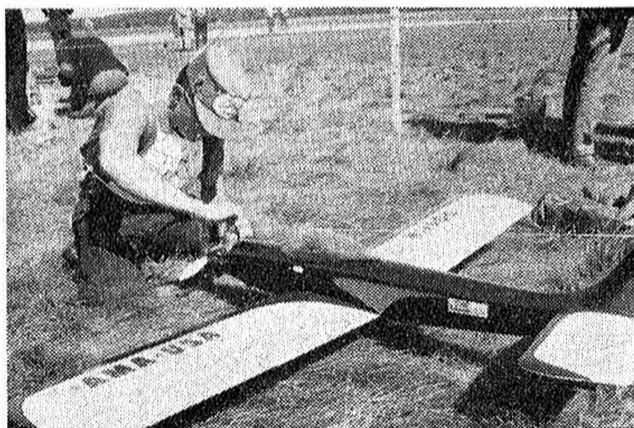
leaving their two children in the care of friends.

The highlight of the whole meeting was the banquet on the Saturday evening to present the prizes — the King of Belgium Cup to Ralph Brooke, together with a beautiful Swedish glass vase (engraved before presentation) with smaller vases to other prize winners. Bev and I were extremely fortunate to find ourselves seated with the American team, due to our similar (not the same by any means) languages. We thus heard the inside stories on the preparations and flying programmes of the Americans. It is obvious that their prowess stems from their dedication to the hobby. Ralph and Jean Brooke for example had been away from their home for more than three weeks, having previously attended the American Nationals.



Chris Teuwin, wife and manager of Belgium team, waiting final flight.

Other highlights of the meeting were a display of formation flying by "Drakens" (double-delta Mach 2 fighters) of the Royal Swedish Air Force; an impromptu demonstration of pylon flying by Ralph Brooke, Cliff Weirick and Nate Rambo during which Nate rolled too far at the first pylon and pulled through — straight into the deck flat out! and a session of follow-the-leader during which Ralph Brooke lost elevator whilst inverted and dived into the ground at 45 degrees fortunately not with his winning "Crusader".



Cliff Weiricks with his third place winner. Model powered by Veco 61, which will not be on the market until 1966.

Three Flight Results

1 Brooke, Ralph Charles, USA	6151 7008 7188 20 347
2 Teuwin, Chris, Belgium	6168 7216 6609 19 993
3 Weirick, Clifford, Glen, USA	6217 6403 7269 19 889
4 Stephansen, Poju, Norway	5997 6103 6770 18 879
5 Olsen, Christopher H. Great Britain	6005 60066 6257 18 128
6 Ritchie, Zelbert, W., USA	5404 6095 6211 17 710

7 Chapman, Ronald Edward, Canada	5848 5013 6732 17 593
8 Foster, Stuart Lawsen, Great Britain	5092 5476 5862 16 430
9 Blauhorn, Karl, Western Germany	4691 5313 6168 16 172
10 Tom, Harold, Canada	5616 5504 4930 16 050



Chris Olsen, of Great Britain, with his Merco 61 powered "UPSET". Radio gear was F. & M. (Reeds). A very well trimmed model. Placed 5th.

Team Results

1 USA	17,772 19,506 20,668 57 946
2 Great Britain	15,020 16,102 17,105 48 227
3 Canada	15,793 15,321 16,967 48 081
4 Belgium	12,212 15,635 15,742 43 589
5 Western Germany	15,497 13,455 13,677 42 629
6 South Africa	14,610 9,885 14,790 39 285
7 Italy	11,158 12,706 13,373 37 237
8 Sweden	12,419 11,274 12,263 35 956
9 Denmark	10,508 9,716 12,971 33 195
10 Norway	9,253 9,169 10,059 28 481
11 Holland	7,514 9,897 9,576 26 987
12 Japan	8,453 9,776 5,490 23 719
13 Czecko-Slovakia	1,274 2,072 1,339 4 685



Chris Teuwin, from Belgium, just after his final flight. At this stage it was thought he was the winner.

24 HOUR RACE AT ASHFIELD

A Report from Max Alexander

An Invitation 24 Hour Race for 1/32 Scale Grand Touring and Sports Cars was held at Ashfield N.S.W.

TEAMS. — St. George, Ferrari GTO; Sydney Electric Car Racing Assoc. (S.E.C.R.A.), Ferrari 250P; Sydney Society of Model Engineers (S.S.M.E.) Snr. Team. Porsche 904; Sydney Society of Model Engineers (S.S.M.E.) Jnr. Team. Ferrari 275 LM.

The race started at the scheduled time of 3 p.m., at 3.14 p.m., the race was stopped due to a short in Blue lane, caused by the spraying of fine copper threads of the pickup braids. The fault rectified, the race continued at 3.27 p.m. For the first 6 Hours S.S.M.E. Snr. Team. drew Red Lane, S.E.C.R.A. drew Blue, St. George, Green and the S.S.M.E. Jnr. Team Yellow. At 4.45 p.m. Track was turned off again with the lap recorders on Blue Lane not recording. Examination of recorders revealed a broken wire which was quickly repaired and the race once again continued. After the first hour St. George had maintained 8.5 seconds per lap with S.E.C.R.A. in second place with an average of 9.75 sec. per lap S.S.M.E. Snr. Team 10 seconds and finally S.S.M.E. Jnr's after an early setback about 25 seconds per lap. During the next 2 Hours S.S.M.E. Snr's gradually closed the gap on S.E.C.R.A. until at the end of 3 hours racing S.E.C.R.A. was trailing S.S.M.E. Seniors by only 10 laps. St. George was way ahead with a further 152 laps. At the end of the 6 hour period when the tracks were turned off and each car was transferred to the next lane St. George was leading with 2540 laps an average of 8.6 seconds per lap. with S.S.M.E. Snr's 2362 a total average of 9.15 and S.E.C.R.A. in third place with 2335 laps and finally S.S.M.E. Jnr's 1809, 38 minutes had been lost during the first 6 hours so the start of Second 6 Hour Period was not until 9.48 p.m. This allowed 10 minutes to change lanes. Drivers of the cars had changed many times allowing them to have tea and also freshen up. Track Marshalling was carried out by "Off duty" drivers with each team marshalling their allotted corners. The usual amount of abuse went to all marshalls, especially when three cars collided at the same corner.

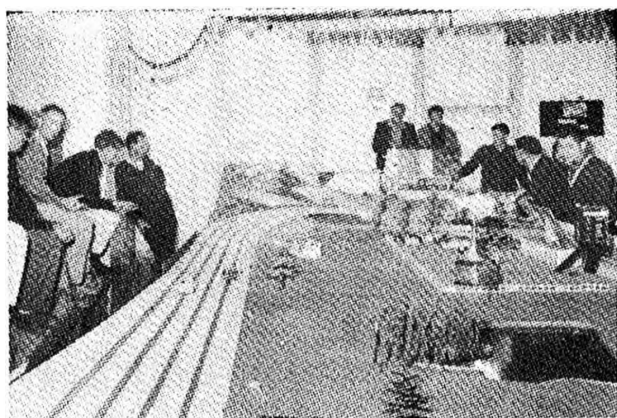
At the start of the Second Six Hour period St. George had covered an actual road mileage of 28.86 miles. If this average had been kept up it would have been possible to cover over 115 miles.

The Second Six Hour period started off badly with S.S.M.E.S. dropping 80 laps on pre-

vious 6 hour average in the first hour with pick up brushes not staying on position S.S.M.E. Jnr. team had decided to change tyres which proved worthless and had to be changed back. St. George team had changed drivers and oiled car and also found Yellow lane lap recorders not functioning correctly. S.E.C.R.A. on Red lane had their car in the pits for 10 minutes or so, even so S.E.C.R.A. gained a further 20 laps on S.S.M.E. Snr. Tension mounted in the second hour as pressure was poured on by S.E.C.R.A. scoring 475 laps, an excellent performance, with St. George keeping pace with 447 laps. S.S.M.E. Snr. was passed by S.E.C.R.A. in this the eighth hour of racing and gradually fell away. S.S.M.E. Jnr. team had its highest lap score to date with 374 laps for the hour. For the next two hours cars and drivers seemed to settle themselves and lap times remained fairly constant. Then just after 2 a.m. calamity for S.S.M.E. Snr's a wire had come off one of the commutator brushes costing the team well over 100 laps while it was being resoldered St. George and S.E.C.R.A. also had some minor troubles but still forged on. In the final hour S.S.M.E. Snr. gained 12 laps over S.E.C.R.A. 19 over St. George and 85 laps over S.S.M.E. Jnr's. This brought the lap score at the end of 12 hours to St. George 4892, S.E.C.R.A. 4611 S.S.M.E. Snr's 4456 and S.S.M.E. Jnr's 3682.

During the last six hours spare drivers had bedded down for some sleep in their cars, on seats with one even snatching some shuteye under the stairs, feet in cupboard. Coffee had also been going around to the relief drivers and track marshalls. A driver who had a "stay awake" pill had found by now he couldn't sleep even though he wanted to.

The first hour in the third six hour period showed St. George giving over 100 laps to SECRA leaving themselves within striking distance, however the next hour and a half added St. George 40 laps over SECRA. After a total of 14½ hours running St. George was now 5934 laps, SECRA in second place 5717 SSME Snr's 5481 and finally SSME Jnr's 4336. Then at 7 a.m. a dice between the three leading teams developed with 10 laps only separating them after 75 minutes of running, this dice continued for the next hour with the SSME Snr's gaining only another 38 laps on the two leaders. This pace could not be kept up so it wasn't long before St. George with a spectacular effort of low flying, left the table, cleared the safety fence



Spectators and competitors during a recent contest conducted on the Melbourne Miniature Car Racing Centre's track.

and landed on the floor. A quick inspection showed no damage and away they went again only to be clobbered entering the esses and having a commutator brush dislodged. This was again quickly remedied and off they went again. SSME Snr's towards the close of 18 hours found a main gear slipping badly, as the track was switched off we found them frantically trying to gain another lap. The score now was St. George 7148 SECRA 6965 SSME Snr's 6665 SSME Jnr's 5136.

Eighty one and a quarter miles had now been covered by the leading car putting them well within the reach of the century mark.

The next 3 hours showed St. George and SECRA with almost identical lap times just ahead of the SSME Snr's. The trouble once more for the SSME Snr's with a pinion coming off the main shaft. This cost them a further 100 laps. However in the 23 hours of racing the St. George car began to slow, very slightly at first but becoming increasingly evident as the race drew on. SECRA began to close the gap on St. George gaining 53 laps at the 23rd hour. SSME Snr's 462 had been for the past hour, pacing with SECRA 465. The noise from St. George's Ferrari was becoming louder. Inspection showed a much worn crown wheel with barely any teeth. With half an hour to go St. George had to make a decision. They were ahead of SECRA by just an 100 laps. Would they attempt to replace the crown wheel or continue with 9 to 10 seconds per lap? The latter was decided upon. With fifteen minutes to go the Ferrari would hardly climb the over pass, only then was it taken from the track. It was held until 2 minutes of the finish where it was slowly driven a lap and brought to the finish line, just as the track was switched off.

This had been the most exciting race ever to be held in New South Wales with St. George (9507 laps) a distance of 108.03 miles SECRA (9467 laps) 107.76 miles SSME Seniors (8982 laps) 102.06 miles, and the Junior Team SSME Jnr's having to retire early in the final 6 hours with a short in the armature (5368 laps) 61.1 miles.

It was announced after the race by the President of the New South Wales Model Road Racing Association, Max Alexander, that a similar event would take place next year on the Queens Birthday weekend with all teams having to compete in elimination trials before the main event.

The drivers participating in this event were as follows:—

St. George Team; D. Page, P. Page, J. Halcrow, J. Ward, S. Lanyon, P. Carter J. Covell.

SSME. Seniors Team; M. Alexander, O. Wimmer, I. Bannister, L. Dyball.

SECRA Team; P. Noskowski, D. Hyslop, G. George, I. Dole, M. Braund.

SSME Juniors Team; P. Shipway, E. Holley, J. Zullion, B. Martin, C. Hook, T. Hayes.

Any New South Wales Club is invited to attend next years race and enquiries should be directed to Mr. Max Alexandra, 4 Princess Steet Lidcombe. Phone 649 5806.

(Continued From Page 11).

choice as it is easy to work with and will make up into a nice strong wing which can be finished with a minimum of filler and paint. The use of 1/8 inch Obechi is to be recommended for tailplanes as it gives a degree of stiffness and flatness far superior to plywood, while at the same time providing sufficient strength. I can't stress too highly the importance of warp free tail planes. If you can't secure Obechi, settle for balsa but only the very hard and preferably quarter grained variety.

For the construction of the fuselage it is best to use white pine or maple for the crutch and balsa for the cowl and fairings. May I suggest that for simplicity; and efficiency on F.A.I. fuels you use the current fashion in cowls. Cut no cooling air ducts in the cowl whatsoever but allow the head of the engine to project into the airstream. This new trend in speed cowls is not really new at all you know as the Gibbs Carter ships of quite some years back used this system with quite a large measure of success. Currently it is the big thing in speed cowl-ing, in the U.S.A. and is used on Nitro fuels as well as F.A.I.

When you get your ship finished test flying should be commenced and if you have settled on monoline control I would suggest you get an experienced flyer to test hop it for you. I am quite sure Andy Kerr, John Morgan or Stu Cobcroft would be only too happy to test it for you and you interstate types should send them return air fare tickets.

Next issue I'll cover propellers, glo plugs, fuels etc. in relation to all speed events and any distributor who wants an appraisal of his products can contact me through Model News.

JACK FINNERAN.

"THE GOSPEL OF SPEED"

According to John

Remember we spoke last month about commending construction on an F.A.I. speed model and the suggestion was to use a well known and respected design.

You should at this stage select an engine and marry it to a metal pan and tank set up and the greatest care and attention to detail should be given to this power pod which is the heart and soul of any type speed model.

On the selection of a pan may I suggest you read once again the excellent article on speed pans in the last issue of Model News. You could well use the comments of I suspect David Kidd. Seems there are a few of us using nom-de-plumes, so to use a well known T.V. commercial lets "Lift that veil, lift that veil". Your writer of these series of articles is Jack Finneran (Mr. Speed — Editor).

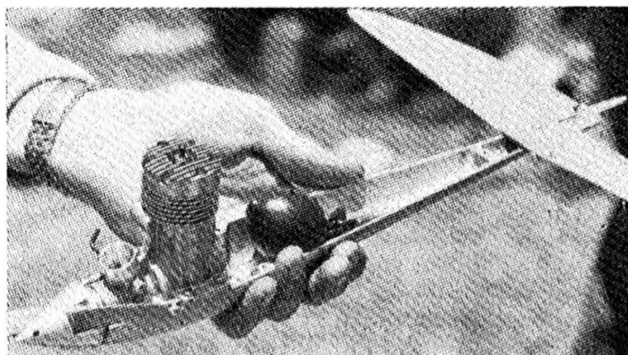
David has for sale some really well designed and beautifully finished pans by Paul Pomadi of England and the extensive range covers any of the engines you may choose for your F.A.I. ship. He suggests the half pan for F.A.I. and I concur, but the full length pan is not to be ruled out completely for F.A.I. as the additional weight is little, if any, handicap and most of the Hungarian and Czech modellers use it.

Fit your engine to this pan so the thrust line is straight ahead or with slight in thrust. Be very careful to see that when your engine is bolted down tight that there is no fouling of any part of the engine on the pan, in other words only the motor mounts themselves should rest against the pan. This is important as any interference between pan and crankcase can cause binding in the engine and nothing will slow an engine quicker than excessive internal friction caused by binding. It goes without saying of course, that the motor mount area on the pan must be perfectly flat and that the bolts must have clearance in the engine mounting lugs for exactly the same reason. "You better believe these remarks". They are much more important than you may think.

Having satisfied yourself that all is well with the mating of engine to pan you now have to select a fuel tank design and decide what method you will adopt to get it to feed the engine satisfactorily.

The operation of the engine and your success or otherwise is going to hinge on this to a greater degree than any other single factor involved in the construction of a speed model. "You better believe it".

The simplest method and usually an eminently successful one is to use a pen bladder pressure tank as this virtually guarantees excellent fuel feed to the engine during its



The power department of a Speed Model. POMAIDE metal Speed pan and a pen bladder balloon tank.

entire run. However I feel that in an F.A.I. speed model its successful usage is not always attained because of factors inimical to the F.A.I. ship itself. The tank space available in an F.A.I. fuselage is rather small physically and a pen bladder under pressure is sure to be squeezed and also it is likely to interfere with the controls. These things you cannot afford to have happen.

My suggestion is a metal tank of some twenty to twenty-five C.C.'s capacity using crankcase pressure tapped from the back plate of the engine to force the fuel to the carburettor. You will find a means of securing this pressure is available on the Torpedo 15 and the Super Tiger 15, but on most other engines it will be necessary for you to organize a pressure outlet on the engine yourself. An absolute must for this system either in the tank itself or in any of the connections between tank and engine.

A long time favourite with the Continental fliers and lately with the Americans is the so called Chicken Hopper fuel tank system. This two cell tank deal has been very largely used by the team race fraternity and when correctly set up is undoubtedly capable of really excellent results. Used in a speed model it has to be set very rich on the ground and released without undue delay or it will quit on the ground before a pilot can make it to the pylon.

Having satisfied yourself that your engine pan and fuel system is A.O.K. you may now proceed with the construction of the plane itself and if you have decided on a Lauderdale, Wisniewski or Rossi, design you probably have an article covering its construction, so I'll only add a few pertinent points to watch. Materials available here as against materials suggested on the plans will surely differ but this will present no real problem as good substitute materials are available. Where bass is indicated for wings may I suggest Obechi as the logical

(Continued on Page 10)

F.A.I. COMBAT

The 19th M.A.A.A. model aircraft championships will, for the first time, include F.A.I. COMBAT. It is proposed that this event will replace present Open Combat. The rules below have not appeared in print before. They will be in force at Canberra.

SPECIAL RULES FOR COMBAT CONTESTS: CLASS F.2.D.

DEFINITION OF COMBAT:

A combat contest shall be between two models flown, in the same circle, the object being to cut in flight a streamer attached to the opponent's model, points being awarded for each cut.

COMPETITOR.

The pilot, who shall be the entrant may employ a maximum of two mechanics. (In exceptional circumstances of wet or extremely windy weather, an additional helper may be used as a streamer holder).

CHARACTERISTICS OF COMBAT MODELS.

In addition to the terms of Part 1.3 :—

Maximum cylinder capacity of engines:— 2.5 centimetres. Artificial aids to streamer-cutting are not permitted.

RADIUS OF CIRCLE

- (a) The length of the control-lines shall be 15.92 metres (52' 2") from axis of handle to centre line of model.
- (b) The radius of the flight circle shall be 19 metres (62' 4").
- (c) The radius of the centre (piloting) circle shall be 3 metres (10').

CONTROL HANDLE AND LINES

The diameter of the control lines shall be not less than 0.3 millimetres. (0.012 inches).

Single line control is not permitted. The distance from the axis of the handle to the point of attachment of the control-lines shall not exceed 4 cm. (1.6 inches.).

The complete control assembly (handle, lines, model) be given a tensile load test equal to 20 times the weight of the model before the start of each attempt.

NUMBER OF MODELS.

Each entrant shall be permitted a maximum of 2 models in each combat period. The streamer must be transferred to the reserve model.

STREAMER

A crepe or similar toughened paper streamer of distinguishing colour .3 cms. (1.2") wide and 3 metres (10') long shall be fixed by strong thread to the longitudinal centre line of the model, with 2 metres (6' 8") free length between the rear of the model and the streamer.

METHOD OF STARTING

- (a) Once both pilots are in the centre circle the first signal, the 1 minute WARM-UP SIGNAL is given.
- (b) A second signal announces the end of the warming-up period.
- (c) Thirty seconds are then allowed, during which last moment preparations may be made, the starter counting the last five seconds.

- (d) The START-SIGNAL is given (90 seconds after the first signal) by means of both a visual signal (flag) and an acoustic signal.
- (e) Duration — The contest lasts 4 minutes from the START-SIGNAL.
- (f) When both models have completed 2 level anti-clockwise laps anti-clockwise and are not less than $\frac{1}{2}$ lap apart, the Marshall will give a prolonged signal, the ATTACK-SIGNAL.

END OF COMBAT

The contest is ended by an intermittent signal the END-COMBAT SIGNAL, 4 minutes after the START SIGNAL, or immediately there is a disqualification.

METHOD OF SCORING.

- (a) 1 point shall be awarded for each whole second that a model is airborne during the four-minute period.
- (b) 100 points shall be awarded for each piece cut off the opponent's streamer by the model in separate attacks.
- (c) No points shall be awarded for cuts of the thread line.
- (d) Two time-keepers/observers shall be allotted to each pilot.

CONDUCT.

- (a) The pilot must stay within the 3 metre centre circle, from the warm-up signal to the end-of-combat signal.
- (b) If a model lands, or is damaged within the four-minute period, the mechanics may position new lines with the reserve model, or change lines on the first model.
- (c) No more than two consecutive laps may be flown at less than 1.50 m. (5 feet) altitude once the ATTACK SIGNAL is given.

ATTEMPTS.

A further attempt to complete the combat period may be permitted at the discretion of the Circle Marshall:

- (a) When there is a mid-air collision:
- (b) Should a streamer or part of a streamer become accidentally detached or fail to unfurl from a rolled state.

CLASSIFICATION.

- (a) The contest shall be run as a knock-out tournament.

(Continued On Page 28).

1965 QUEENSLAND MODEL AIRCRAFT CHAMPIONSHIPS

By Arthur Gorrie

This was the third year John French has won the Champion of champions trophy which each year has been a handsome unit.

The programme for next year's championships will be decided upon at the next M.A.A.Q. meeting.

Events will be limited to 24 in number.

Efforts were made last year to prune the programme but it finished up with two more.

Prizes are exceedingly more difficult to obtain and with increasing numbers it is a strain on the purse and the sponsors.

Thanks is extended to the Beaudesert Club for the use of their field which is ideal and our grateful appreciation must be shown to BP Australia for providing us with their theatrette enjoyable films, and supper. These surroundings make a fitting and pleasantly social conclusion to the flying year.

Next is expected to be better than ever.



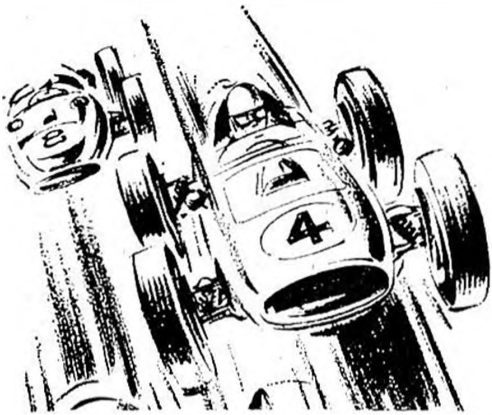
Old. Champion of Champions for the third time — John French — with his MAC.60 Speed model.

A.2 Sailplane, E. J. French S.M.A.C., A. Gorrie N.M.A.A., C. Mahoney Beaudesert. Wakefield, E. J. French S.M.A.C. Jetex, E. J. French S.M.A.C. Class I Power M. North N.M.A.A. B. Shea N.M.A.A., E. J. French S.M.A.C. F.A.I. Sailplane, E. J. French S.M.A.C. T. Spence Beau., R. Walter Thunderbirds. Open Rubber, E. J. French S.M.A.C., D. McKellar S.M.A.C., A. Gorrie N.M.A.A. Class II Power, T. Spence Beau. M. North N.M.A.A., A. Gorrie N.M.A.A. Scale



1965 Queensland Scale Champion, Des McKellar, with his winning model of the "SOUTHERN CROSS"

Free Flight, A. Weston N.M.A.A. Scale Radio, G. Kruberg B.A.R.C.S. F.A.I. Power, E. J. French S.M.A.C. Class III Power, E. J. French S.M.A.C. Chuck Glider, T. Spence Beau. D. McKellar S.M.A.C. E. J. French S.M.A.C. A.I. Sailplane, R. Walter T'Birds, T. Spence B'desert. E. J. French S.M.A.C. Scramble T. Spence B'desert, D. McKellar S.M.A.C. E. J. French S.M.A.C. Radio — Single, J. Mulchay B.A.R.C.S., R. de Chastel S.M.A.C. R. Kyle N.M.A.A. Radio Intermediate, M. Newman T'wmbe, J. Mulcahy B.A.R.C.S., R. de Chastel S.M.A.C. Radio Multi, M. Newman T'wmbe, J. Simms Dalby, J. Mulcahy B.A.R.C.S. Combat, E. J. French S.M.A.C. R. Walter T'Birds, R. Edgerton N.M.A.A. 2½ Combat, R. Walter T'Birds, A. Gorrie N.M.A.A., E. J. French S.M.A.C. Scale Control Line, D. McKellar S.M.A.C., R. McKee S.M.A.C., R. Walter T'Birds. Stunt Open, R. Edgerton N.M.A.A. C. Woodhead N.M.A.A., E. J. French S.M.A.C. Stunt — Junior, S. Lightowler N.M.A.A., A. Gorrie Junior N.M.A.A. Novice Stunt, A. Gorrie Jnr. N.M.A.A. D. Nowell N.M.A.A. Proto Speed — A. E. J. French S.M.A.C. A. Gorrie Jnr. N.M.A.A. Proto B, R. Neilsen S.M.A.C., E. J. French S.M.A.C., D. McKellar S.M.A.C. Champion of Champions, E. J. French. Speed — Class I, E. J. French S.M.A.C., B. Stanbury B.A.R.C.S. Speed Class II, B. Stanbury B.A.R.C.S., F. Dotti S.M.A.C., E. J. French, S.M.A.C. Speed Class III, R. Morrison T'Birds, E. J. French S.M.A.C. Team Race Half A M. North N.M.A.A., E. J. French S.M.A.C. Team Race — F.A.I., E. J. French S.M.A.C., M. North N.M.A.A. Team Race B Class, R. Morrison and R. Walter T'Birds, E. J. French S.M.A.C., M. North N.M.A.A. Team Race C Class, E. J. French S.M.A.C., R. Morrison and R. Walter T'Birds. Rat Race A Class, R. Neilsen S.M.A.C., D. McKellar S.M.A.C., G. Olson S.M.A.C. Rat Race B Class, R. Morrison T'Birds, R. Neilsen S.M.A.C., C. Woodhead N.M.A.A.



TRACK BUILDING and Its Effect on a Club

By R. McLennan

The formation of a Slot Racing Club, discussed briefly in the last issue, is affected by track construction. At first thought this may seem hard to believe. Lets then consider the subject from a club point of view.

The physical size of the track or circuit, in floor area determines the size of the building required to house it. The converse is also very true. A point often over looked, is the fact the shape of the circuit dictates the number of members, over and above those actually racing. The over-worked corner marshal is always a requirement and this fact should always be remembered.

Based on experience, it is possible to quote some figures which will guide, would be club formers, on the subject of floor area and the number of club members. The gross area of the circuit, including driving positions and control desk should be approximately one sixth of the total area of the room. In order to provide an effective pit or working area, each member should be allowed 25 square feet in which to move. This area should be in addition to the track floor area.

As an example lets consider a room 40 ft. by 20 ft. Our basic rule indicates that a Track/Driver area of 130 sq ft. is acceptable, whilst the membership should be a maximum of 27. In order to run the club efficiently at least one spare "round" of drivers and corner marshalls should be available, if we assume an average of 80 per cent turn up, then the track should be designed for approximately 7 corner marshalls as a maximum.

How many lanes and what shape are questions which arise. We should bear in mind that the greater the number of lanes the greater the track area required. Most clubs have 4 lanes. The question of shape is, or should be, tied to the corner mahshall problem. As the name implies, this often criticized member, should be placed at a corner and should not be expected to retrieve cars outside a radius of three feet. This indicates that no section of the track should be more than six feet wide. In designing the driving positions we should ensure that each driver has an un-impeded view of the road surface, perhaps a raised dike would prove advantageous.

Tracks basically fall into two groups, road circuits and speedway oval type layouts. Should we aim at reproducing a full size circuit in miniature, or should we let our heads go and design for lots of lap length in a minimum area. Fortunately the choice must be left to the designer, bearing in mind that there is no perfect layout — someone will always find fault with it. Is it necessary to have a fly over. A bridge serves the useful purpose of allowing the lanes to be made of equal length, it however complicates the wood work — the decision must be left again to the designer. Should you decide on a bridge, do not forget that these vertical curves or bumps will limit the ground clearance of the car. An 18 inch vertical curve or bumps will limit the ground clearance of the car. An 18 inch vertical curve with a 3 inch wheel base requires a minimum ground clearance of one sixteenth of an inch. The sharper the curve or bump the higher the ground clearance required.

Every would be designer should begin by sketching the layout and drawing a scale drawing of the circuit, to ensure that your sketch is practicable, always draw at least the inside and outside lanes. In the design stages it is difficult to imagine whether all lanes will be equally as fast, invariably we find that one lane is quicker, even though the lane length may be equal. What points should we look for to prevent this? A layout which has a straight down one side usually ends up with larger entry and outlet corners when compared with the inside lane. The outside car therefore enters and leaves that straight at a higher velocity. Can we reproduce a high speed section somewhere else to overcome this. A large radius bend preceded by a short straight and a tight corner will be governed in speed by the small bend. Accelerating around a bend is far more difficult than accelerating on a straight and coasting through the bend at the end. Perhaps it's desirable to have left and right hand bends into and away from the straight. You must be careful in your choice for the position of the bridge, since this can limit your entry into

the bend velocity. Some thought early in the piece will save you a big modification later on.

How fast will your design be? This is dependent on many things, perhaps the most important of these is track surface. One basic requirement of the surface should be to have reasonable tractive capabilities, it should remain consistent and if possible be unaffected by dust. Dust is the biggest destroyer of traction and cornering forces, it promotes wheel spin the enemy of all slot racers. High Gloss paints, rubber based paints and sanded surfaces are in use all over the world, no standard is laid down, it is left to each individual to select his own. Sometimes the hard way. The High Gloss surface detracts in appearance and is subject to severe failure from dust, without consistent maintenance. Rubber based paints or flat paints require frequent refurbishing and are also affected by dust. The sand impregnated surface gives long lasting, maintenance free service but tends to damage cars if they roll over. Once again the choice is left to you, as the designer.

The second criteria for speed or lap times is the shape of the circuit. Unfortunately there is no hard and fast rule for comparing tracks and speeds. However it can be said that if we add up all the bends in degrees left and right and divide this by the lap length then the figure obtained — "track constant" — in degrees per foot of circuit enables us to say that the higher this figure the slower the track. As a guide I would say that a circuit constant of 15 or more is a tight circuit, $7\frac{1}{2}$ to 15 results in a very fast circuit and below this we are tending to a speed bowl. Laycocks rules for the Duncan 150 tracks of up to 200 ft in length, with a min. of 70 ft. gave a range of figures of $4\frac{1}{2}$ to 13 degrees per foot. The $4\frac{1}{2}$ degree per foot circuit will not be 3 times as fast as the 13 degree per foot layout, the ratio is more likely to be less than the square root of 3.

This article has been a little different to the normal run of track building articles which normally tell the story of how to use a ruler, router, saw etc. I have attempted to point out some of the criteria which should be considered when contemplating the building of the circuit I further hope that it will be of use to the would be club formers and track builders:

SUPER SHELLS

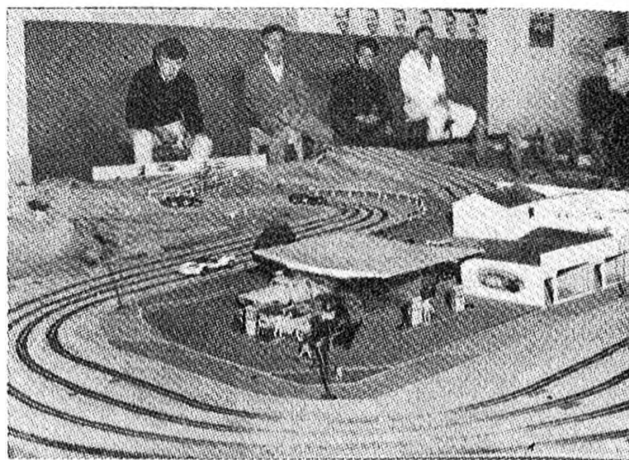
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52 PLAYFIELD STREET, CHERMSIDE, BRISBANE

The Melbourne Miniature Car Racing Centre



The Melbourne Miniature Car Racing Centre is a commercial type track with this difference; it caters to clubs, five in all, not to the thrill seekers. The circuit, 96 ft. in length, has four lanes, scenery and most of the normal road racing hazards one would expect to find, competing in the real thing on the Continent or at our own Sandown, for that matter.

It features a slow "driving" section with a 1 in 1 climb to a hairpin, down again to a nasty chicayne hairpin, a couple of short straights with right angle bends onto the overpass which dips into the back straight, thru the fast banked turn and down the finish straight past the pits, and then back into Poplar Drive — sounds impressive, and it is.

Impressive enough to convince Total Oil to sponsor a 24 hour "Le Mans" type race for a magnificent perpetual trophy we had hand-crafted for the occasion — and now our latest "sell" — The "Revell Grand-Prix".

Contestants will race 1/30 — 1/32 scale G.P. cars of pre '60 formula libre class and post '60 F. I. class for a perpetual trophy, which will be air-freighted to us and a long list of valuable prizes — all Revell equipment of course. Any interstate hot-sloters interested, can send their cars by post and proxy drivers (our best) will arranged, but of course we would rather see you racing your own entries.

We have prospective backers for other classics later in the racing year, these include a 12 hour Rally, a Vintage Concourse and a Trophy Grand Prix all 1/24 scale incidentally. The centre committee will be organising these events which have been placed on the Victorian Slot Car Association Calendar and entry forms and rules will be sent to this magazine for publication and will be available on application.

F.A.I. POWER ^{PART} II

By Ford Lloyd

If you are serious about winning F.A.I. events there is only one motor that will do, the most powerful you can lay your hands on for it takes a very good engine to drag a 26½oz. model high enough in 9½-10 secs to max. consistently without thermal assistance.

Fortunately there are a number of motors readily available, that are ideal for what we want without recourse to expensive reworked specials.

At the top of the list is the latest Super Tigre G15 which is credited with over 6 b.h.p. on 60% Nitro-Methane, it is a robust motor with no plastic to break, is easy on plugs, even on straight "Blast" and is easier to start than most beginners motors its smooth running is a note-worthy feature.

A fitting companion to the G15 is the 64 series of K & B 15R. which is a beautifully made engine with a performance to match, its starting characteristics are outstanding.

Although now superceded by the G15 the G20/15 Super Tigre is still a motor to reckon with and given the right fuel and prop will keep you in the winners circle.

The Cox range engines, particularly the 09 and special 15 MK II have an imposing list of credits to their name including a World Championship and have been the favoured power plant by Australian flyers since their introduction in 1960, Cox motors are so well fitted that no running in is required although some increase in performance can be expected after the first half hours running.

Plug consumption on heavily doped fuel can be excessive but for all that Cox engines can be strongly recommended.

The ultimate performance of any motor is a reflection on how it is treated when new, the engine should be run-in as for the manufacture instructions until all the rubbing surfaces are bedded in and free from excessive friction.

Remember a motor that is "tight" or not properly run in is difficult to tune for top performance and the modeller should blame himself and not the motor if it doesn't give.

Become used to starting the motor, know how much priming to use, establish the best needle setting so that on DER TAG you need only to adjust for humidity and temperature, use a filter in the fuel line and be sure the plug is OK.

Pressure? Yes or no; Well that depends on the particular engine you use. Although some careful plumbing is needed a pressure system ensures that when the motor is correctly tuned it will go up hand all the way with no sagging at the beginning, particularly if a javelin launch is used, and extra bonus if using a flood-off system of stopping the pressured motor is the clean stopping there is no burbing and possible over-runs.

Some motors notably the S.T.G15, G20/15 and K & B15R will not run satisfactorily without pressure and although the Cox range of motors

will run well without pressure it is my opinion that a low pressure take-off of the backplate pays dividends with extra performance on hot fuels.

A pressure system requires special means of stopping the motor and although most contest flyers are acquainted with flood-cut systems there is another method that is just as effective namely the pressure release and squeeze tube system used by some of the leading English contest flyers.

PROPS. Although reworked wooden props may be best consumption can be heavy if you fly a lot, and for that reason alone a good nylon prop is a practical compromise. Choose your prop wisely for its the only means of converting engine power to useable thrust.

The Cox motors of 2.5cc capacity seem to go best on the 8 x 3½, 8 x 4 sizes but the Super Tigres and K & B15R's who develop their peak power at 20000 and over need smaller props to be able to wind up 7 x 4's such as the Tornado and Topflite nylons are OK but my choice is the Cox 7 x 3½ nylon. Ensure the prop is properly balanced for out of balance props means vibration and subsequent loss of power.

TIMERS. A reliable timer is a must for contest work and if you don't feel like reworking a camera timer choose a K.S.B. or Acada shut-off timer with care, before buying run the timer several times and by holding it to your ear note if the mechanism runs smooth, individual examples vary considerably, Tatone Timers can be strongly recommended.

Dethermaliser timers are very useful but unless you like building models frequently and can afford to replace expensive motors it will pay you to use a combination fuse and mechanical timer system. A practical double system is outlined in an article in the April issue of Aeromodeller.

FUELS. Although today's "Hot" motors run well on straight fuels a hot brew is a must for top end performance and fuels such as Blast are recommended.

The Super Tigre range and K & B 15R's will take up to 60% Nitro Methane although plug life will be short.

If Blast or similar fuels are not available a useful brew can be made using 45% Nitro Ethane, 5% Nitro Benzine, 20 percent Castor M and 30 per cent Methanol.

Nitro Ethane is an inexpensive replacement for Nitro Methane and is available from Kendon Chemical Co. Pty. Ltd. 637 Chapel St. South Yarra, Victoria.

TRIMMING. No matter how good the model and motor may be contest winning performance depends ultimately on the trim. indeed it is the trim that sorts out the men from the boys.

ECLIPSE F.A.I. Mk. II

Described by Ford Lloyd

The accompanying plan is the latest variant of an original design by Victorian Peter Nash.

Some 7 or 8 Eclipses have been built over the past few years and it is a tribute to the design that all have trimmed out with the minimum of fuss, and have figured prominently in Victorian and Nationals F/F events. Ron Greeves recently won the Victorian F.A.I. champs., using this design.

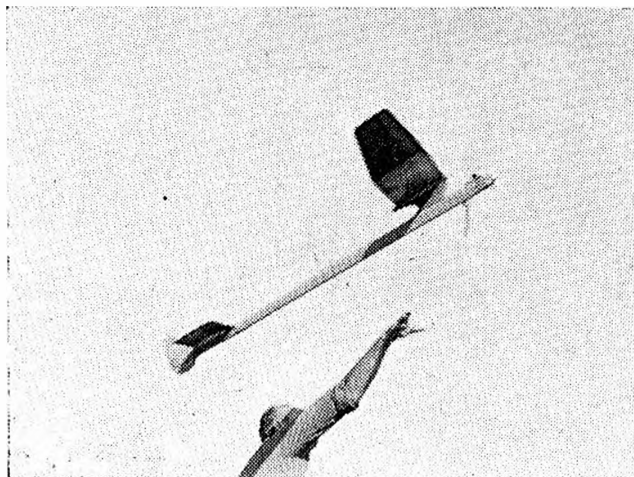
The original model was powered by an O.S. Max 15 motor and under the old 15 second motor run rule had a very fast climb using auto-rudder to achieve a good transition from power to glide. Later examples were powered with Cox motors and the design presented now has a Super Tigre G15 and it is interesting to note that apart from a faster climb no unwanted flight characteristics have shown up and the faster speed gets the model over the hump without recourse to auto-rudder or other gadgetry.

Although simple to build the Eclipse is not a beginners model and it is suggested that experience be gained with lower power F/F models before tackling the high powered variety.

CONSTRUCTION

Begin by cutting out the fuselage sides from 1/8" medium balsa four foot long splicing an extra piece in the region of the pylon to give the correct length. Glue on the 3/16" square stringy balsa longeraus and add the 3/16" balsa doublers and when dry slot and glue in the 1" x 5/16" hardwood engine bearers. Cut the pylon from 3/8" ply and laminate together two pieces of 3/16" ply using contact cement as the adhesive, rasp to streamline shape and sand to a smooth finish, attach the 10 S.W.G. skid with J. bolts and glue well with Araldite. When dry glue the fuselage sides to the pylon using 3" thick balsa spacers to suit the particular engine you are using.

Cut the fin from 3/16" medium quarter grain and glue between the fuselage sides making sure at this point that the fuselage, pylon and fin are correctly lined up, add the 1/8" balsa formers then glue on the 1/8" balsa bottom sheet. Make up and position the fuel tank made from shim brass or tinfoil, making provision for pressure fittings etc, glue on the 1/8" balsa top sheet then add the 1/8" ply wing platform and balsa gusset to strengthen the joint, add tail plane platform and balsa block underneath the engine bearers.



Ford Lloyd Javlin assisted launch. F.A.I. Eclipse

Face engine bearers with 14 gauge Dural using Araldite as the adhesive, when cured drill holes to suit your engine and then sand the entire model smooth, rounding off all square edges of the fuselage.

Give the fuselage at least four coats of full strength dope sanding smooth after every second coat, do not use dope around the engine bearers at this point.

Cover fuselage with silk and give a further 4-6 coats of dope using 00 paper to produce a smooth finish. Now give the engine bearers, holes and pylons area 3 coats of fuel proofer and one good coat to the rest of the fuselage. Note two part Polyurethane finishes such as Bostik, Noxal or Forminec are recommended for fuel proofing.

Fit engine timer and other hardware such as snuffer tube and screw adjustments for fin and stab.

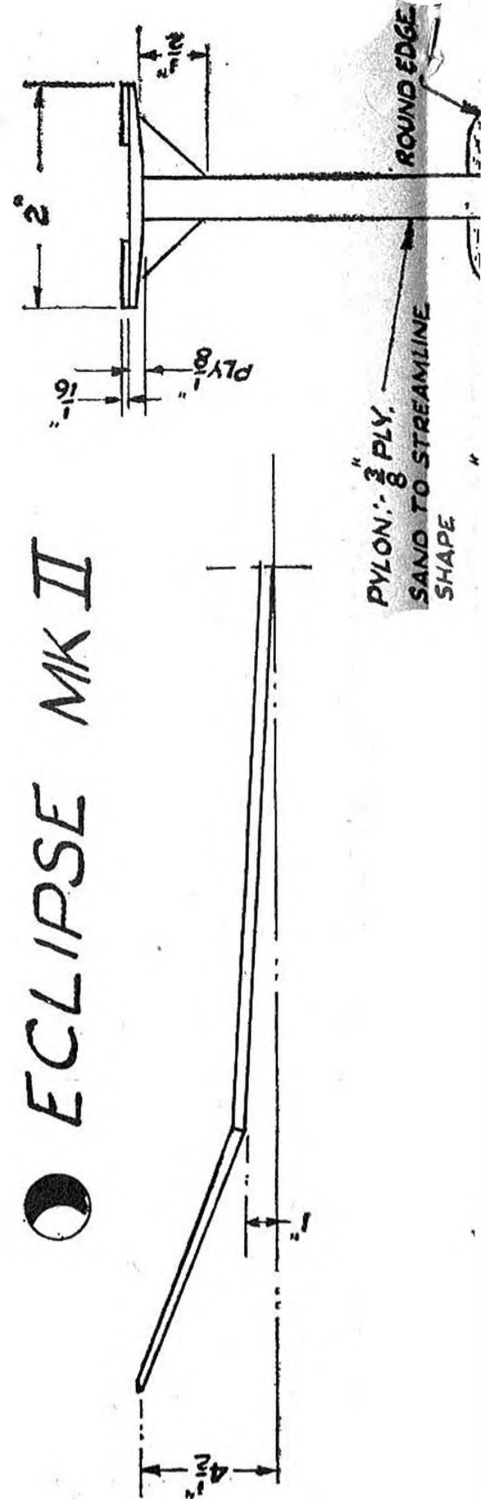
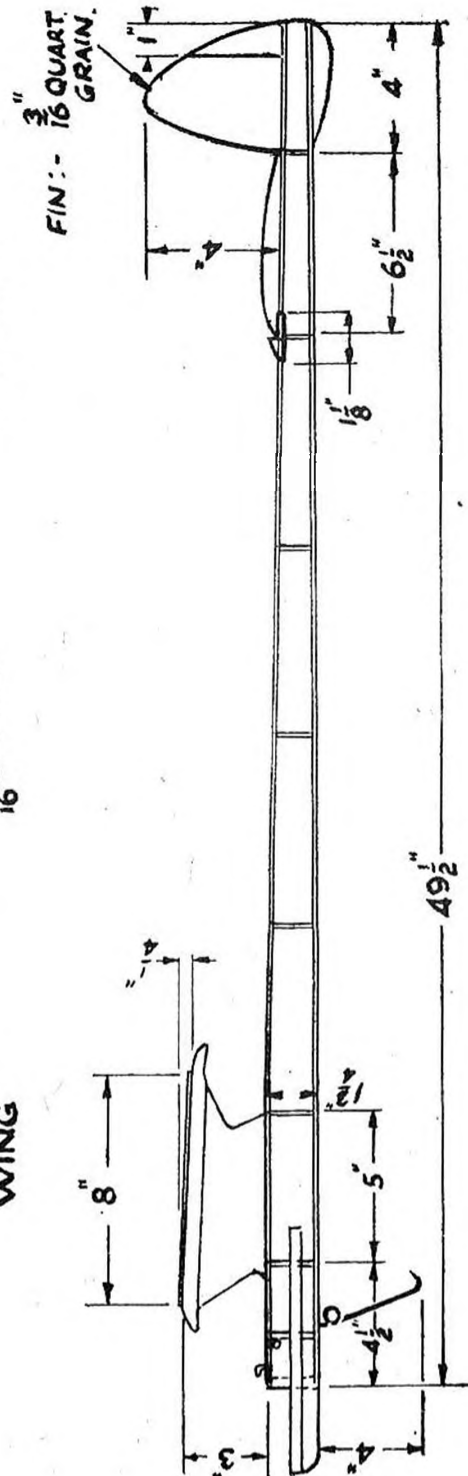
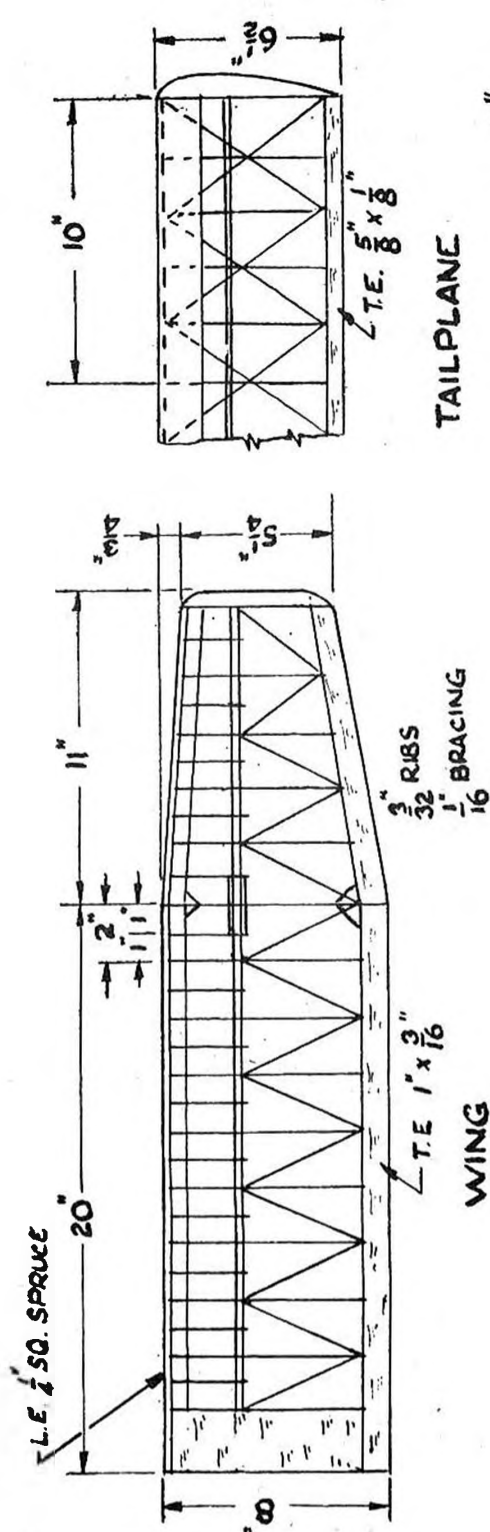
WING

Commence by making up the L.E. by glueing 1/4" square spruce or very hard balsa to 3/8" x 1/8" balsa as per plan. Pin the L.E. and T.E. to the plan position the 1" x 1" spruce main spar and glue the ribs, riblets and diagonal ribs into place, the diagonal ribs are cut from square stock and sanded to correct shape when glued into position.

When making up the starboard panel position all parts together and before the glue has set pack-up the L.E. at the dihedral break and allow to dry over night.

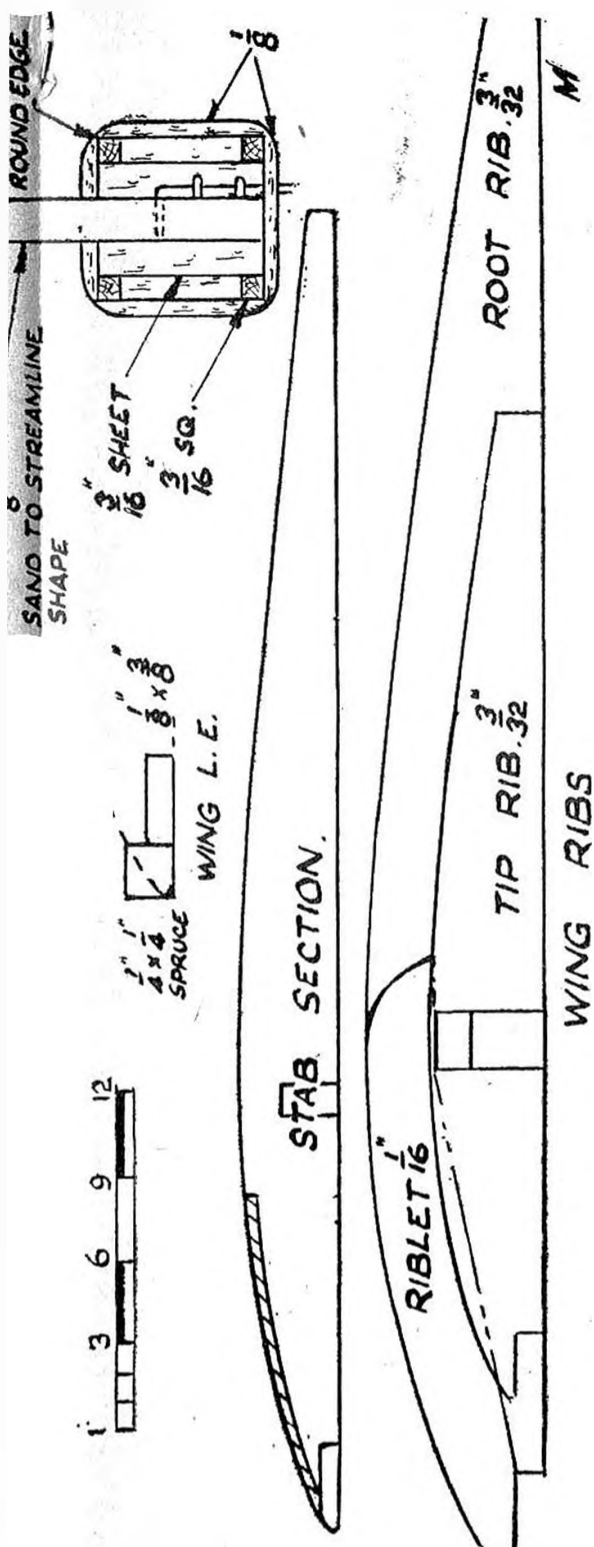
Join the wing panels using 1/16" ply each side of the span at the dihedral break, add gussets at leading and trailing edges then join the two wing panels together using 3/32" ply extending out for two panels each side. Add centre section sheeting then give the entire wing at least four coats of dope. Sand smooth then cover with silk applied wet. Give wing 6-7 coats of 50-50 dope and thinners sanding with 00 paper between every second coat. Add MAAA numbers; name and address and finish with one coat of clear Dulux.

(Continued On Page 21).



● ECLIPSE MK II

Wing and Stabilizer Sections are full size.



size.



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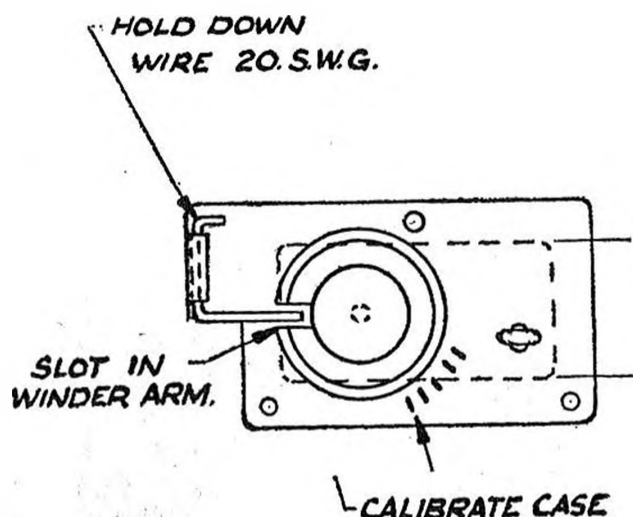
AGENTS: N.S.W. Artmil Industries, c/- Shorter Agencies, P. O. Box 40, Ermington. 'phone 638.3934 Q'land. Geo. Wills & Co. Ltd., 140-160 Mary St. Brisbane; 'phone FA 1991. Sth. Australia: Geo. Wills & Co. Ltd., Gilbert Place; 'phone LA 1211 West Australia: Dormar Indents Ltd., 636 Hay St. Perth.

REWORKING THE KOPIL CAMERA TIMER

As used by the Victorian Free Flight Experts

A reliable accurate engine timer is essential for contest free flight particularly so for F.A.I. power where the total motor run must not exceed 10 secs. from time of launching.

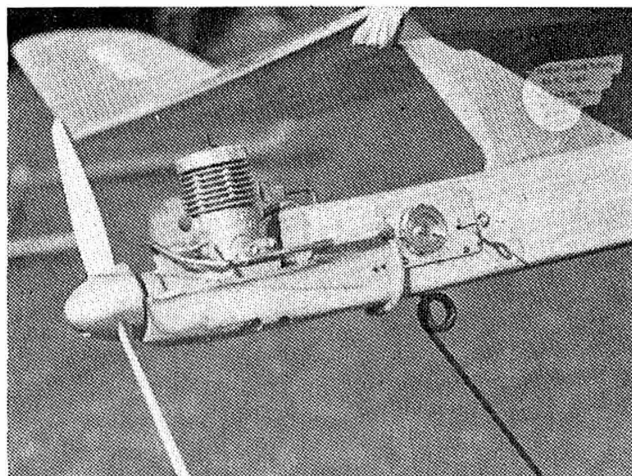
Apart from the well known "Tatone Timers" which can be regarded as reworked specials most commercial timers available are apt to vary considerably in accuracy and are very susceptible to engine vibration and atmospheric conditions and for these and other reasons dyed-in-the-wool contest fans overseas sometimes rework camera timers such as the Autoknifs to ensure consistent motor runs.



At a recent F.A.I. contest in Melbourne several well known contestants were plagued with engine over-runs from timers that had, up to that time, been quite consistent which led to an investigation of the camera timer position to ensure better results in the future.

Apart from the German Autoknifs which can be bought in several versions there are several Japanese camera timers such as the WALTZ and KOPIL that looked as if they could be adapted to our needs with the minimum of skill.

The KOPIL concern did at one time produce model engine timers so we decided to try our hand on a specimen we bought at a suburban camera store for 28/-.



Muscle and brain dept. of Ford Lloyd's Eclipse. Reworked camera timer and flood-off system, 7 by 3½" Cox Prop. fitted with a Veco spinner. Note coil spring skid.

The conversion proved so simple that provided you are not completely ham fisted you could rework one yourself with the minimum of trouble.

Having bought the timer start by unscrewing the drive pin from the side of the case and then remove the back-plate by unscrewing the two retaining screws.

Next prize off the cover plate that is lightly glued into the winder disc then unscrew the retaining nut and two screws on the front of the case and the complete timer mechanism can be removed.

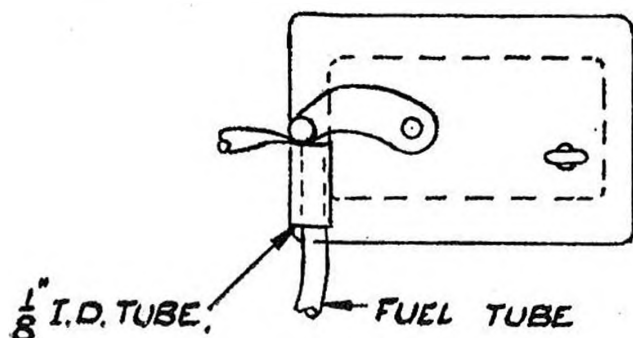
You will notice that the "works" are very similar to the current Acada timer with the exception that the spring and governor are housed completely in the case and also the mechanism cannot completely unwind and gives a constant 15 second run.

The first step in remodelling the timer is to make a new case by forming .0020 aluminium or shim brass around a hardwood form to the measurements on the plan, if using aluminium the corners can be sealed with Araldite and cured in a hot oven for twenty minutes, shim brass can be lightly soldered.

Next trim off the rounded end of the discarded back-plate and fit it into the new case as a guide to drill the 1/16" holes to allow the new case to be screwed to the "works" after drilling the holes remove the old cover and any metal burrs and fit the timer and cover together.

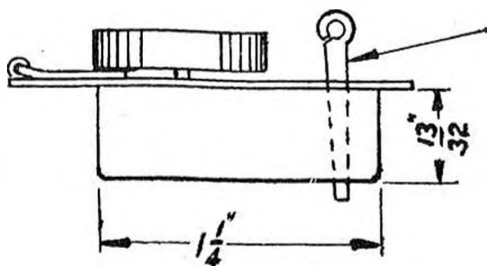
It will be noticed that immediately above the governor is a squarish hole through which an arm on the camera timer protruded to lock the mechanism on, our system substitutes a 16 gauge pin to retrain the governor and it is necessary to drill a 1/16" hole along side the governor and through the bottom plate of the timer and also the cover, remove all metal filings.

ALTERNATIVE FUEL - CUT OFF



The final step is to make a new face-plate again using .0020 aluminium or brass and using the camera case as a template for drilling the $\frac{1}{16}$ " holes for the screws and $\frac{3}{16}$ " hole for the winding disc shaft, the face-plate should be cut slightly oversize and trimmed to the final shape, when fitted to the case.

FLOOD-OFF SYSTEM.



RELEASE PIN MADE
FROM 16 S.W.G. WIRE
TAPER TO $\frac{1}{16}$ "

Before fitting the winding disc a $\frac{3}{32}$ " hole is drilled in the face-plate to line up with the $\frac{1}{16}$ " holes drilled in the case to allow the 16 gauge pin to be fitted.

The timer as shown is rigged for a flood-off system and the bearing to take the hold down wire can either be formed from the face-plate material or a brass or aluminium tube can be Araldited on, a slot is filed into the winder disc for a depth of $\frac{3}{16}$ ".

An alternative face plate for a squeeze tube can be made as for the plan the timer arm being taken from a discarded Acada timer.

So far two camera timers have been modified and have proved satisfactory in actual flying, the pin being inserted to lock the timer mechanism the timer arm or disc is turned to the required number of seconds required, the engine is started and the pin removed just before launching.

(Continued From Page 17).

STABILIZER

Pin the leading and trailing edges to the plan then glue in the main ribs the geodetic ribs in, cut from straight soft quarter grain, and sanded to shape when dry, add spar and $\frac{1}{16}$ " sheeting, cover with top tissue or lightweight modelspan, give 3-4 coats of thinned dope and flush with one coat of clear Dulux.

FLYING

Assemble the model making sure that all is square and that it balances at 3" from the T.E. Check that the motor has no down or side thrust and key the wing to ensure accurate alignment, the stabilizer should be tilted parallel with the starboard inner wing when viewed from the rear. Ensure that the model is up to F.A.I. weight the Eclipse should weigh a minimum of 27 ounces, then commence testing by hand gliding, the model should have a flat glide with a definite right turn of some 100 feet diameter.

When the glide is OK start the engine and tune for peak revs, then launch the model up at an angle of 70 - 80 degrees to the right of the wind, a motor run of 3 - 4 seconds should show if the power pattern needs adjusting with slight side thrust on the motor or rudder trim, no down thrusts has been needed with any of the models produced to date.

Once a safe trim has been established the Eclipse MKII only needs fine adjustment to make it a threat in any F.A.I. contest. See you at the Nats.

For any further information about the Eclipse MKII write to Ford Lloyd, 32 Pyalong Ave., Rosanna, Vic.

MAKE THE 19th
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SUCCESS

ATTEND either as a competitor
or spectator

Radio Notes



B.A.R.C.S: News

By Gregory Kruberg

Now with a new field at Bald Hills, members have been pretty keen on flying. The club now pays for the mowing of the strips, and has a toilet and tool shed. An aerial photograph covering about twelve square miles is extremely useful in case of fly aways.

I hear Ron de Chastel and Jim Mulcahy are planning to make separate attempts at an endurance record. Jim's last effort ended in disaster when the large machine ploughed into the left. Eric Wildemouth after a spell, finally got tired at seeing other fellows successfully flying multi, and built a "Smoghog". It turned out at 10 lbs. 8 ozs. with an O.S. 50. He did very well in keeping it airborne the first and pressed those keys like a pro. I hear he is after a bigger motor. Frank Hetterick is still flying his G-String. Ralph Kyle cannot manage to bend his "Invader". It just seems to fly and fly. Reg Hart still flies his faithful "Cicada", with his new O.S. .19 R/C. Jim Mulcahy and Stan Pullen are doing very well in multi so far with all their fine flying over the last few months. John Lindberg seems to have nothing but crashes, but he is not the slightest deterred in any way.

Jim O'Brien has a single channel flying wing. The most aerobatic manoeuvre it will do is a turn. It flies well even in strong wind.

Parachute dropping from models is a recent novelty, and children are seen running after them for miles across creeks and scrub. (It is a good way to get the kids out of your hair for a while). It is quite simple to work. A pin releasing a rubber band stretched over the chute on the bottom of the fuselage when low motor is selected is all that is required. Quite a large number of new chaps are getting into radio now and it will be good to see many new flyers in the near future.



Norm Bell's Senior Falcon, immaculate finish, O.S. Motor, Grundig 8 channel, Bonner Servos. A fine performer with an all up weight of 6½ lbs.

R.C. Display at Kedron High School

This display was given by Gilbert and Jeff Simpkins and Peter Arlotte of Newtown Model Aeronautical Association. Gilbert and Peter flew on 27.24 megacycles and Jeff on 40.68 megs. Gilbert flew a Mini-Robot with O.S. 1cc. motor, 5 AR receiver and KII escapement. Peter flew an In-KI escapement Both used Gilberts Advance vader with O.S. 2.5 motor, Pixie receiver and Silvertone transmitter.

Jeff flew an Invader also, with a 2.5 cc. O.S. motor 40.68 meg. Pixie receiver, Elmic Commander escapement and home-built 40.68 meg. transmitter. All three planes were flying on a continuous transmission system devised by Gilvert & Jeff. This system works on the transmitter giving out a continuous signal and the escapement is wired off the top and centre contact, so that when the transmission ceases the escapement is actuated.

This system gives the advantage that if any trouble occurs in either transmitter or receiver, the plane spins in instead of flying away, thereby valuable escapement is recovered.

There were many successful flights on both frequencies, and many with two planes up together. All three planes underwent a series of manoeuvres, including spirals, loops and rolls. There were a couple of minor breakages but all in all, it was a very successful afternoon of flying.

JEFF. SIMKINS.

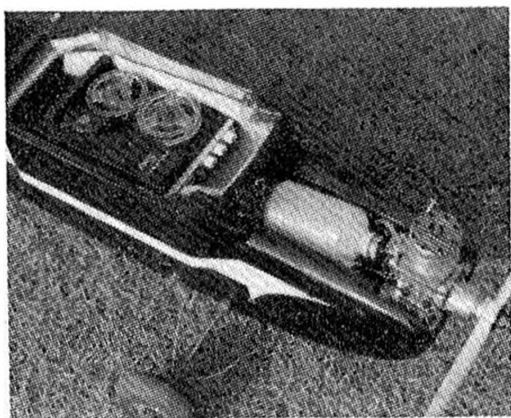
O.S. Proportional Tested

With proportional gear one of the main topics of conversation amongst the multi flyers, we received in the mail recently a colour photo (which we will try to print) showing a Smog Hog fitted with the much heralded O.S. proportional gear.

This plane has been flying in Japan and carrying a complete tape flight recorder, which monitors all signals sent to the aircraft. Evaluating the information received has been just part of the extensive test programme carried out by the Ogawa Co. over the past two years whilst preparing their proportional gear for production.

The tape recorder certainly seems to be an unusually good idea, for how many times have we been flying at extreme range, or with a vibrating engine, and whilst perhaps the plane and its gear have responded to every signal — just how strong was that signal, and how close were we to the limit.

With O.S. multi and single proportional sets now arriving in Australia, and coming late on to the world scene after such an extensive test programme, it would seem that this gear should at least bear the stamp of reliability.

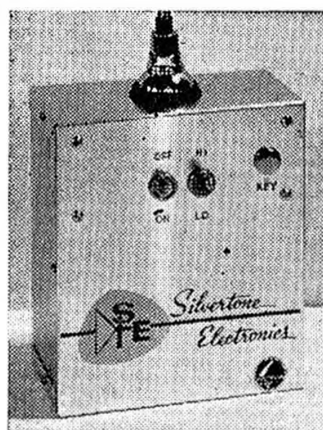


R/C Model fitted with test equipment to test the new O.S. Proportional gear under flight conditions.

New Committee for M.A.R.C.S.— Geoff. Glass Pres., Alan Griffiths Sec., Norm Jermoy P.R.O., Bill Abboss Senior C.D.; Geoff Buck Display Organizer.

FOR SALE: Silvertone 6 Simultaneous Transmitter and Receiver, as new, £60; O.S. 10 Chan. Simultaneous Superheterodyne Transmitter and Receiver, very good condition, £90 or offer. Also many Motors in new condition and many Transmite Servos, etc. Apply CLIFF COVERDALE, 12 Pennant Pde., Carlingford, N.S.W. 86 5774.

FOR SALE: Ten Channel Relayless Multi-rig. Comprising Ecktronic Kraft tri-simul Tx and Ace Kraft Rx. (matched at the Kraft factory) plus 4 Transmite Servos and 1 Duramite with Bonner Amplifier. Servos mounted on dural tray and wired to Rx. A complete system ready to go. £100. Air-freight free. RADIO CONTROL IMPORTS, 800 Canning H'way., Applecross, W.A.



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27 M/Cs, £22/5/- — 40 M/Cs, £23/5/-

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TEST REPORT

NEW O.S. SINGLE CHANNEL MOTORISED ESCAPEMENTS DESCRIPTION

For many years now, the Ogawa Co. of Japan has manufactured a range of excellent rubber driven escapements.

Now, their S101 Single Channel Rudder Servo and S101M 3 Position Motor Control Servo, have been released and have been on sale and in use around Australia for three months.

DESCRIPTION

Both units are the same size measuring 2½" x 1½" x 1" and weighing 2 ozs. The main case is heavy duty dural anodised blue with a lightweight aluminium lid, which snaps into place. Rubber grumets provide shock proof mounting.

Rudder connection is made to a 9/16th" diameter output wheel and the main shaft projects through the case for the installation of an aileron take-off wheel, which is provided separately with the servo (why doesn't someone use ailerons for single channel and clean up!).



S101

Inside the case, we were pleased to see that a SEPARATE plated steel chassis, secured the motor and both sides of the main shaft. Here we found that the all important shaft with its printed circuit, was supported at each end by bronze bearings. This is an excellent feature, as experience has shown that types using the case alone as a bearing, soon develop wear, allowing the shaft to vary in position and placing the attached printed circuit out of alignment.

The gears are very cleanly cut and marked with O.S.; obviously specially made for the servos. An important feature here shows that the centre gear is located on either end of its axle by the steel chassis. Here again is an improvement which doubtless others will follow, as gears bolted direct to the case on one side only, tend to change position too easily.

A five pole motor drawing only 130 m.a. is employed; and on test showed tremendous torque and a complete absence of dead spots. Once again the motor is attached to a nylon boxplate and bolted into position.

The electric motor is fully suppressed for spark interference and tests with a Pixie, 5AR and R.S.-1 Superhet Receivers, showed that the servo did not in any way affect the sensitivity or operating of the receivers.

Epoxy printed circuit discs are used with non corrosive contact fingers.



W101S

OPERATION

The S101 Single Channel Rudder Servo has a compound action — one signal left, two right and three triggers the S101M Motor Servo.

It was noticed that the rudder response was just as fast as any rubber driven escapement, an unusual feature with an electric unit. At the same time, the movement was extremely powerful and last, but no means least, we did not experience any malfunctions or overrides.

Motor Control was obtained accurately and easily using the S101M in conjunction with the S101. It was not necessary to hold on to the third position — merely "hit" it and release. The S101M is a three position motor servo giving fast, medium, slow and fast engine speeds.

Batteries used are three pencells for the rudder servo and one pencell extra for the S101M.

We regarded the most conclusive part of the tests covered actual flying with small and large engines.

The test plane with a Max. .40 pushing out the power, responded perfectly with the S101 and S101M. This test with larger engines demands that the servos be able to stand up to vibration and load on the moving control surface.

We liked the fast powerful action and complete reliability of these single channel servos. The workmanship is first class and the design shows that all possible trouble spots have been engineered for complete safety.

Our only criticism is that the instruction sheet was stuck together and tore when we opened it.

Price of the S101 £6/3/6 and S101M £5/15/-. Samples from O.S. Distributors (Aust.).

Now, a 3-engine Stormer



Twin engine and a Tri-powered Radio Control Models from Victoria. Performance is good and no ill effects from engine failure. Want to try something different?

After the last issue of Model News, where his "Taurus on floats" was written up, we were surprised to receive photos and details of Tony Farnan's latest flying machine. Having notched more than fifty successful flights with the seaplane, Tony with the help of Arthur Dennis converted a spare Stormer wing to accommodate two O.S. Max .19's, worked in unison, by an Annco servo.

At the time of writing Tony has been out on two successive Saturdays, and really burnt up the sky.

Using an O.S. 12 channel superhet outfit, he has the two smaller engines independently controlled from the larger centre motor, and already spectacular take-offs and landings have been achieved with the two .19's flat out or idling, or alternatively the .50 on full bore or cut back.

There has not been the slightest difficulty with motor starting or synchronization and on one flight when an outer engine stopped through an air fuel leak, it was found that the model performed perfectly on the centre and side motor; in fact the .50 was reduced to idle and the remaining .19 revved up and without undue difficulty, the model flew around on one Max .19!

It was found that spins were spectacular and fast (new Aust. record for tri-motors) and inverted flight presented no problems. The adjustment made to the model was to increase the elevator trim travel.

The next step is to discard the undercarriage and try the model on floats! Whilst most of our readers are probably shocked at the mere thought of the fuel bill for his wild machine; its good to see modellers tackling an out-of-the-rut project and succeeding.

We wonder what will be next?

O.S. BREAKS THE PRICE BARRIER!

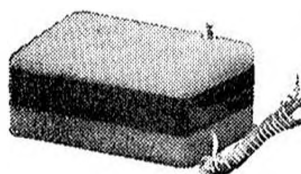
"PIXIE" POWERHOUSE TRANSMITTER

WITH —

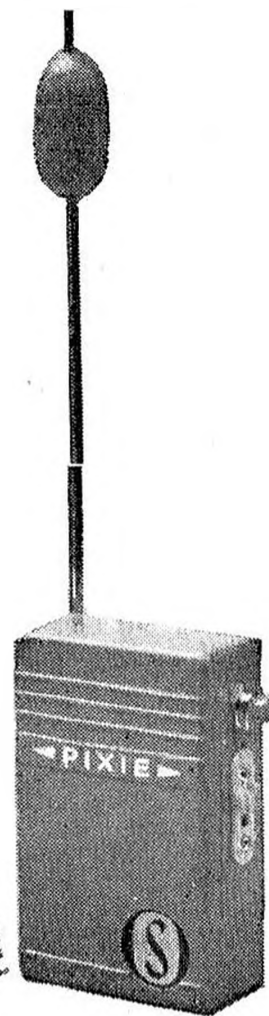
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2 Erasmus St., Surrey Hills, Vic.

WAGGA R/C MEET MULTI GOES TO VICTORIA

Geoff Glass, winner of Multi Contest at Wagga. Has used over 30 galls. of fuel in practice. Model MAX.58 powered Stormer.

This was the fifth year that the big N.S.W. versus VIC Radio Control Competition has been held at Wagga and once again N.S.W. managed to win the Interstate Trophy with 78 points to 66.

Run on Saturday 2nd and Sunday 3rd October, the weather turned out to be perfect, and flying during both days was of a consistently high standard. A feature this year that was most noticeable, was the tremendous number of full house multi models, with both states finding it difficult to field strong teams in Single and Intermediate.

The Victorians turned up in force with no less than sixty five enthusiasts, most of them flyers, making the journey, compared to about half that number coming from New South Wales. Despite their numerical strength, the southerners did not have a dedicated enthusiast like Tom Prosser to fly in every event, and once again, as in almost every other year Tom notched up a great number of personal points by winning the Single Channel and Scale and coming second in Multi and Intermediate.

With Multi as the prestige event and last on the programme, N.S.W. called on Winley, Healy, Prosser and Millarts as their four man team to compete with Glass, Hyde, Farnan and Walsham from Victoria. Every one of these eight pilots flew steady patterns and together with the other three events there was not the slightest suggestion of radio malfunction. On the day, Geoff Glass flew his Stormer very smoothly through all manoeuvres to finally dethrone Tom Prosser. In fact, because the scores of these two were so close, a flyoff was called for and Glass although not flying as well as his first flight, still came out on top as Prosser flew more roughly than his first effort.

Geoff Glass showed at the Nationals that he was a force to be reckoned with as he came a very close third Prosser and Winley.

He went on to win the Victorian Multi Championships early this year and now by winning the Multi at Wagga, must be regarded as the man to beat at the Canberra Nats. Glass's secret for success is consistency and practice, and in his two identical Stormers which are now two years old, he has used (and has receipts to prove it) no less than thirty gallons of fuel! Motors alternated in the models were Merco .61 and O.S. Max .50 and . Max. .58, with the radio gear



being the one O.S. Superhet 10 Channel Receiver operated for the first year by a Rep-tone Valve Transmitter and for the past ten months by an O.S. 10 Channel all Transistor TX-10—Transmitter, which Geoff purchased from Tom Prosser at the last Nats.

In third place in the Multi came Anthony Walsham Vic, flying very smoothly, and once again showing the advantage of long hours of practice repeating the set pattern. Walshams inverted flying was extremely confident and he will be one to watch in the future. Basil Healy seemed unlucky not to score more points, as his flying was better than his performance at the Nats. L. Winley surprised by not flying a smooth pattern which was unusual for him and brought him in at fifth position. Tony Farnan lost many points in the eights and loops because his Taurus was turning out of the manoeuvres possibly through wing warps and despite high scoring on other parts of the flight, the competitions nowadays don't permit the slightest deviation from a perfect pattern.

A big disappointment to the Victorians and to the flyer himself, was the seventh place flown by Bob Hyde. He was using his new Digimite Proportional Outfit and in practice had the smoothest performing model at Wagga. Bob has only had a short time to change from reeds to proportional and his nerves got the better of him this time — but look for him in top bracket at the Nats. K. Millarts from N.S.W. set his motor too rich, but flew a worthwhile pattern regardless to finish up in eighth place.

MULTI RESULTS.— 1st. G. Glass Vic. 1752 pts. 1488 pts. in Flyoff. 2nd. T. Prosser N.S.W. 1758.5pts. 1452 pts. in Flyoff. 3rd. T. Walsham Vic. 1667.5 pts. 4th. B. Healy N.S.W. 1587.5 pts. 5th. L. Winley N.S.W. 1476.5 pts. 6th. T. Farnan Vic. 1457 pts. 7th. R. Hyde Vic. 1262 pts. 8th. K. Millarts N.S.W. 1113 pts.

Flying Scale was easily the second best event at Wagga with full teams being fielded by both States. Tom Prosser with his beautiful PIPER PAWNEE came first with 645.4 pts. followed by Alan Griffiths and Tony Farnan teamed to enter a Fairchild P. T. 19 gaining 628.2 pts.

Third position went to L. Winley's impressive Mustang with 611.7 pts. and Richard Shaw's fine flying Piper J3 came in fourth at 605.5 pts.

The first world war SE5A of Bill Lynch flew realistically as always scoring 473.9 pts. and sixth position went to Laurie Nam's outstanding Nieuport 27. Biggest plane in the Scale was Jack Bones lovely AVRO AVIAN scoring 434.3 pts. to claim seventh place with a tiny LUTON MINOR collecting 269.3 pts. to give George Mallet the eight spot.

The Scale event was all the more impressive a part from the excellent models entered, because they all flew well, without the usual messing around sometimes associated with this event.

Individual scores for the Single Channel and Intermediate Events were not to hand at the time of writing, but these competitions have dropped in popularity with the type of keen enthusiasts who travel hundreds of miles to Wagga each year. There is even talk of dropping these for next year in favour of events using the multi gear possessed by most of the flyers.

As reported elsewhere, there was no question of the outstanding reliability of the various brands of equipment used by the modellers at Wagga, with no crashers whatsoever in the thirty two competition flights, and only one of two mishaps in general flying with the less favoured single channel models, and even then the owners admitted pilot error. Most popular brand of equipment used was O.S. Superhet Multi Gear followed by Silvertone Multi in Superhet and Superregen. In the competitions it was equally divided between O.S. Superhet and Silvertone with one or two home developed sets and two Grundig Multi's and one Digimite.

The fact that a flyer like Geoff. Glass can put thirty gallons of fuel through his radio model without the slightest equipment failure, speaks volumes for the reliability of present day gear, and the fact that those coming into the hobby "have it easy".

Perhaps the most spectacular thing at Wagga this year was the unintentional power dive Tom Prosser turned on when he got into

some sort of difficulty when flying a multi model over the crowd. The plane screamed out of the blue at tremendous speed and actually brushed the grass as it tore through the pits before climbing to safety. Tom on the Sunday spun a model from a speck in the sky to the plaudits of spectators while Tony Farnan demonstrated his Tri-Stormer powered with two Max .19's and a Max .50. This machine did all the manoeuvres at great speed with all three engines nicely synchronized and letting out a



Lyle Winley's Sterling "Mustang". Model took 3rd place in R/C Scale. Was 2nd Nats and 1st at Minto.

most impressive roar. Later many of the modellers went to Lake Albert where Tony flew his Taurus on floats. This really caught the imagination of those who had not seen a multi model on floats before, particularly as it flew inverted, spun, and did touch and goes on the glassy surface of the picturesque lake. John Marquette and Richard Shaw left firmly vowing to bring seaplanes to Wagga next year, and along with other novelty events under consideration, a float plane contest could interest many.

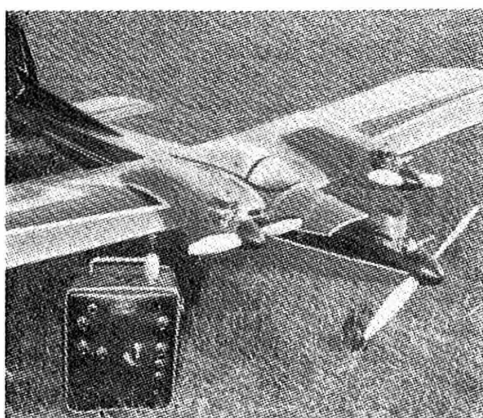
FINAL RESULTS.—

	N.S.W.	VIC.
SCALE	22 pts.	14 pts
SINGLE	17 "	19 "
INTER	22 "	14 "
MULTI	17 "	19 "
	78 pts.	66 pts.

Aero Modellers

FLY SAFELY . . .

FLY AWAY
from
POWER LINES



Tom Farnan's Tri-Motor Stormer, flown at Wagga

(Continued From Page 12).

- (b) The entrant who amasses greater score in points in each heat, will be matched against the winner of another heat in that round.
- (c) By process of elimination, each round reduces the number of heats by half so that there are semi-finals and a final.
- (d) The placing of the finalists is established solely on the results of their flights in the final. The remaining two semi-finalists are placed according to their score in the semi-finals.
- (e) In the event of a tie, the heat shall be re-flown.

DISQUALIFICATION

Both flyers will be disqualified from that heat and from the remainder of the contest if they deliberately co-operate by passive action.

An entrant will be disqualified (his opponent proceeding to the next round) if:—

- (a) He deliberately prolongs the warm-up period or attempts to start the engine (s) before the START-SIGNAL.
- (b) He attempts to use an artificial aid to streamer cutting.
- (c) His model is not airborne within 2 minutes of the start signal.
- (d) He attempts to fly any model which cannot remain under full control and airborne under its own power.
- (e) He deliberately attacks prior to the ATTACK-SIGNAL.
- (f) He deliberately attacks the opponent's model (as distinct from the streamer).
- (g) He interferes with his opponent or forces him to leave the centre circle.
- (h) He deliberately leaves the centre circle.
- (i) He continues to attack after the END COMBAT SIGNAL.
- (j) He flies in a dangerous manner either deliberately or unintentionally.

Modellers will Note that H/L is permissible — hence the very necessary rule that keeps the pilot in the centre from start to finish.

1965 F.A.I. WORLD MODEL AIRPLANE CHAMPIONSHIPS

CLASS F.I.A. RESULTS

Nordic A. R Sailplane

1. Anton Bucher Switzerland, 900, 240 282.
2. John O'Donnel Great Britain, 900, 240, 152.
3. Kjell Bentzen Norway, 900, 240, 143. 4. Gunnar Kalen Sweden, 900, 240, 122. 5. Gerard Klomp Holland, 900, 240, 122. 6. Stefan Hubert Czechoslovakia 900, 210. 7. David Tipper Great Britain, 900, 193. 8. Thomas Kongsted Denmark, 900, 122.

CLASS F.I.B. RESULTS

Wakefield Rubber

1. Thomas Kster Denmark, 900, 240, 300, 360, 257. 2. Vladimir Matweev U.S.S.R. 900, 240, 300 360, 217. 3. Bengt Johansson Sweden. 900, 240, 900, 196. 4. Lennart Flodstrom Sweden, 900, 229. 5. Rune Johansson Sweden, 900, 221. 6. Jürgen Horn German West, 900, 218. 7. Frank Parmenter U.S.A., 900, 212. 7. Egert Oskamp Netherlands 900, 200, 9. Alan Armes Great Britain, 900, 188. 1. Julije Merory Yugoslavia, 900, 188. 11. Vilim Kmoch Yugoslavi 900, 183, 12. Masary Itoh Japan. 900, 174.

CLASS F.I.C. RESULTS

F.A.I. Power

1. Alberto Dall'Oglio Italy, 900, 240. 2. M Bourgeois France. 900, 239. 3. Evgenii Verbizkii U.S.S.R., 900, 227. 4. Benno Schlosser German West, 900, 223. 5. Viktor Onufrienko U.S.S.R. 900, 212. 6. George French Great Britain 900, 203. 7. Vladimir Hajek, 900, 190. 8. Robert Cherny U.S.A., 900, 173. 9. Carlo Lenti Italy, 900, 163. 10. Jorma Kumpulainen Finland, 900, 159. 11. Nilserik Hollander Sweden, 900, 153. 12 M. Landeau France, 900, 152. 13 Andras Meczner Hungary, 900, 142. 14. James Robinson U.S.A. 900, 128. 15. Gianfranco Grifoni Italy, 900, 120. 16. Henry Spence U.S.A., 900.

CLUB NOTES

Eastern Suburbs

I think it would be a most fitting gesture, if at our next club meeting, all ESMAC members were to remove their prop-driven headgear and stand in reverent silence for some minutes as a token of our heartfelt sympathy for the many recently departed members of the other Victorian model aero clubs. To all interstate readers all this means is that at Victorian State Championships, ESMAC "killed 'em all", and emerged as the 1965 winner of the Sun Shield, awarded annually by the V.M.A.A. to the top club in Victoria. Last year we were just pipped at the post by Elsterernwick-Caulfield M.A.C., but this year we beat these same worthy opponents by a good many points. Better luck next year fellers.

This year's success by ESMAC reflects the healthy state of this club. We boast a club spirit of which we are rather proud, and which, no doubt, contributes to the success we have enjoyed for many years. To all our members who took part in this year's State Championships we say congratulations and many thanks fellers.

At our Annual General Meeting on 30th July last, the club expressed its confidence in our President by re-electing "Doc" Livingstone to the post again this year. Congratulations "Doc". As a matter of interest to interstate aeromodellers, A. J. ("Doc") Livingstone is also the Federal Secretary of the Modell Aeronautical Association of Australia. His activities as an aeromodeller go back over many years, and in the main part he is a confirmed free flight addict. His prowess as a secretary will be well known to all state secretaries, and appreciated by all aeromodellers within a very short time.

Vice-Presidents of ESMAC this year are, Jack Howie, John Douglas and Ford Lloyd. Our new treasurer is Des Theiss. Well known stunt flyer Ken Dowell, replaces Bob Lambert as our club secretary.

On behalf of ESMAC, I would like to extend our thanks to Bob for his many years of service as our secretary, and we sincerely hope that he will not be lost from the aeromodelling scene. Please! Please! do not mistake our skindiving ex Sec. for a whale. On July 25th last, ESMAC played host to a C/L Stunt meeting which looks like changing the face of this particular branch of our sport. The brainchild of ESMAC member Peter Fletcher-Wells, the event was voted the most enjoyable stunt event held for quite some time. Designed for stunts powered by motors up to 3.5cc, this event was introduced to allow entries from

aeromodellers, particularly the younger ones, who cannot afford to build the "barn doors", flown in open stunt contests. Several expert flyers who competed in the ESMAC Trophy, commented on the fact that with this smaller type of stunter, they really had to "fly" straight and level. A far cry from the larger models which in many manoeuvres virtually fit themselves. Full credit must go to Peter Fletcher-Wells for introducing and organizing what we hope will become a premier event on our calendar.

While speaking of Peter Fletcher-Wells, let me voice a warning to all aeromodellers. If you are a speed fan watch out for Pete. Pete recently set an unofficial State speed record and together with two other ESMAC members, Andrew Kimonides and Peter Ellis, Peter has the machinery and the ability to threaten both Australian and World speed records.

Finally, to end this report I would like to thank those V.M.A.A. Delegates who saw fit to elect me as V.M.A.A. Secretary.

Alan Gosbell,

E.S.M.A.C. PUBLICITY OFFICER.

1965 Maitland Field Day

Maitland turned on the most fantastic winter weather ever experienced.

Open Sailplane: 1st A. Cooper 671, 2nd C. Cox 667, 3rd T. Stowe 666.

Notice only 5 secs. between first and third.

Open Power: 1st. R. McDonald 659. This is still the fastest climbing power model in Australia. 2nd A. Butler 579, 3rd A. Cooper 561. Coop. was flying an old rule (new model) 40 oz. job for his Eta VI. This machine will really go when all the bugs are ironed out. Coop. is threatening to build a 26 oz. job for the Eta for the Nats.

Open Rubber: 1st A. Butler 898, 2nd D. Hegarty 859, 3rd A. Viiri 634. Tarn Stowe best junior with 308.

Chuck Glider: 1st A. Viiri 4 maxes. 2nd B. McQuillan 166, 3rd. G. Fahey 154.

Arto Viiri had a 9 minute flight and the machine landed 100 yards away. His 16 minute flight did not come back. All in all a most fantastic week-end.

Tom Prosser's radio single became thermalised on its approach to land (rectangular pattern). Most embracing.

Radio: 1st T. Prosser 3494, 2nd B. Healey 3434, 3rd L. Winley 2893.

Single: 1st T. Prosser, 2nd J. Quigley, 3rd B. Healey.

(IVOR F. STOWE).

Stardusters M.A.C.

It looks as though John French will once again be Champion of Champions — 3rd year running — as he is so far ahead on points that it does not matter much what happens on the last day.

Ralph McKellar has just finished building his first control line model — as usual where Ralph is concerned the plane was very nicely finished and flies like a bird. The control line boys had better keep a keen eye on Ralph for the next Queensland Champs.

Stardusters are holding an Open Field Day and Bar-B-Q on the 3rd October, which will be run as per M.A.A.Q. rules. Events being 500 lap B class Team Race: Chuck Glider: .09 Combat and Balloon Bursting and Precision Landing.

All flying will cease at 4.30 p.m. and a Bar-B-Q will then be held.

Everybody is welcome so long as they bring their own steaks.



A gee String, built and flown by John Heeley, of Cumberland R.C.M.C. ten channel Silvertone radio, Merco 49 up front.

Cootamundra M.A.C.

(By Geoff Barron)

Since our fortunate permission to use a large paddock, belonging to a farmer 2 miles from town, flying activities in the freeflight field have increased greatly.

We now go out both days of a week-end when possible. Sailplanes have become popular. Ian Kirley started with a 40" span kit, and this started things. Since then, Robert Shelley has built an Aeroflyte "Falcon", and his brother Graeme has also started one, Grant Manwaring is building a large one, a "Leprechaun" (19" wing chord) and I am flying an Aeroflyte "Cirrus", with a Cox "Pee Wee" .020 on top. It flies well, and has given me the inspiration for a power assisted R/C sailplane.



Cumberland R.C.M.C. member John Heeley endeavouring to keep plane and ground apart.

In the radio department there is quite a bit of activity. Norm Roberts' "Invader" is still going strong with an O.S. .15 up front, but he recently fitted an O.S. .19 in the hope of getting loops, rather than having the model reach insufficient speed and roll out. My 2.5 cc. O.S. powered O.D. job is nearly ready. The radio is O.S. "Pixie", controlling one of those beautiful new S101 O.S. compound servos. These have remarkable power for low current drain. Robert Shelley has the wing on the way for his low-wing Pixie controlled model (using Taipan 1.5 glo), and Brian Pettigrew will use an S101 servo in a boat first, before trying the wonders (?) of planes.

Recently, some members of a group of flyers from Griffith and Temora visited Cootamundra. and Peter Rangott put his 6 channel controlled "Tauri" through many manoeuvres, which was a good insight into full house multi flying.

With the Nats. so close this year, it is possible several of our members will attend, and we hope, enter.

Anyone reading these notes in the country is welcome to contact me at — Flat 5, 319 Parker Street, Cootamundra. N.S.W. and we may all get together.

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Scale Model Racing Club Oakleigh

At the present time we are in the throes of moving our track from its present location to new and larger premises. The track will also be extended about 20 feet before we will resume racing at our new club.

We are, at the moment, only a small concern, owing to limitation of the present track and lack of room in the garage we were racing in. Our plans are to build a new and much larger and improved track, as soon as finances allow. We feel that in the new premises we will be able to have many more members that we were able to in the old ones, thus building finances for the future track.

At the moment we hold a 'perpetual trophy' meeting every two months for the 'Mac's Metal Polishers' Cup. The winner of the Cup being the person with the highest number of points over this period of time.

On the 16th April last we held a meeting for the 'Oakleigh Cup', the victor being one of the club's original members, Geoffrey Thorne. The meeting was most successful and competition very keen. Geoff. has since sailed for England where he hopes to compete successfully, and will also be able to keep us in good supply of all the latest 'goodies'.

When we are settled in to our new premises and have everything under control, we will advise you of our new address, etc., so that any visiting enthusiasts may call in and race if they so desire.

Our present track is 32nd Scale only, but the new circuit will accommodate 24th, 25th and 32nd Scales, each to be raced on alternative nights.

Hoping the above information will be of interest to you, and hoping to see any visitors to our State who are interested in Scale Model Racing as they will be made more than welcome.

Ashfield Drag Results

A Drag race for Slot Cars of 1/32 and 1/24 scale held at Exhibition Park Ashfield on August 1st brought 80 cars from 6 Sydney Clubs. Many independent entries were also received.

The track 41' 3" for 1/32 scale and 55' for 1/24 scale represented a standard 1/4 mile as used in all Drag events. Fitted with an automatic timing device it was possible to record times accurate to 1/100 th of a second. The fastest time of the day was a dragster owned by J. Hislop of North Sydney club recording 1.7 sec. for the 1/32 scale standing quarter in the Unlimited Dragsters event. This is equal to a land speed of 480 M.P.H.

Class A Sports and Grand Touring Cars 1/32 scale, M. Braund Mercedes 190 SL e.t. 2.00 seconds.

Class B Touring Cars 1/32 scale, R. Hanley Jaguar Mk. 10. e.t. 1.99 seconds.

Class C. Grand Prix Cars 1/32 Scale, I. Bannister, Alfa Romeo, e.t. 1.86 seconds.

Class D Altered Coupes, 1/32 Scale, J. Hislop, 1948 Holden e.t. 2.27 seconds.

Class E Unlimited Dragsters 1/32 Scale, J. Hislop, Buick-Morris Special e.t. 1.7 seconds.

Class A (as above) 1/24 Scale, D. Hayles, Scarab e.t. 2.44 seconds.

Class B, C, D, Unlimited 1/24 Scale, M. Alexander, 1965 B.R.M. e.t. 2.48 seconds.

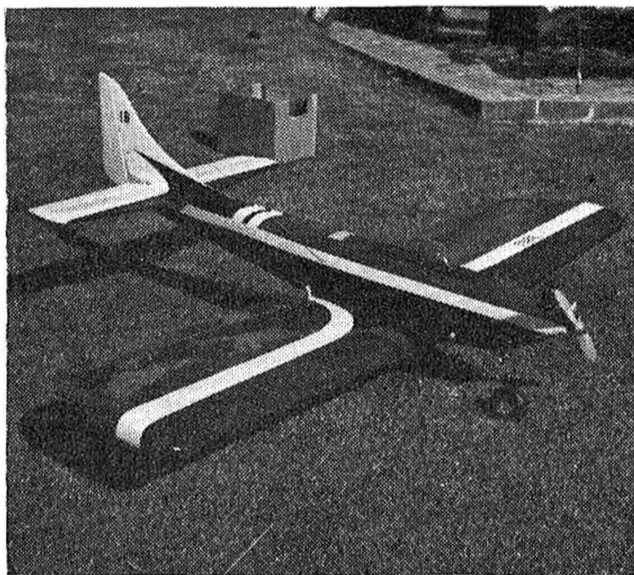
Class E Unlimited Dragsters 1/24 Scale. T. Hayles First Special e.t. 1.82 seconds.

Due to poor representation in 24th Scale Classes B, C. and D were combined.

This was the first Drag Racing ever to be held by the newly affiliated New South Wales Model Road Racing Association. The aim of this association is to combine all New South Wales Slot Car Clubs for standards in construction and racing rules. Competition interstate and overseas would then become possible. Enquiries are most welcome and should be directed to Mr. Max Alexander, 4 Princess Street, Lidcombe. Phone 649 5806 for details.

Model Slot Car Racing is not only for the young as most competitors at this Drag Race were well over 21. A recent American Model Magazine advertised a track and cars for Dad and a Junior set for Son (or Daughter) so that Dad could run uninterrupted. So lets hear from you.

Exhibition Park is situated at 190 Parramatta Rd. Ashfield, open each Saturday afternoon, providing a canteen, with model boats, racing cars and working scale model trains with train rides for children.



A "Skyliner" built by Nev. Sinnott and painted in the Tauris colour scheme. Enya 45 on the fan. Home built radio, a very good flying model, would be ideal as a second model after the straight out trainer type.



There has been quite a bit of activity on the water in recent months. This "G-STRING" on floats is by Arthur Dennis, of Vic. Power is MAX. 58 R/C with O.S. Superhet 10 Channel.

Newcastle M.A.C.

Maitland field-day has come and gone once again. The weather on Sunday and Monday morning was perfect, but Monday afternoon was plagued with an Easterley breeze.

In Proto Speed, Ron Neville did a screaming good job in burning out K and B 29 in a shaft run. It was stopped by the usual method of drilling a hole in dirt, meanwhile portions of the rota disc ground away inside.

Combat. Not much streamer cutting but plenty of prop flicking though. Maybe a return to standard motors and fuel could be the answer?

Free flight and Radio. Again competitors were down in numbers compared with last year.

Free Flight. Ron Adamson entered a Viking, with a large amount of nose weight to counteract a slightly heavy tailplane. Needless to say, the flight pattern was not perfect.

Sailplane. Strong thermal lift. when found. All eyes watching what appeared to be an A-2 disappearing up and into the sun when a voice cries from the crowd "It's me chuck glider".

Power "Shambles". What else can one possibly say. The models ranged from the under powered feather to the over powered Javelin.

Radio, single channel. Lou Morgan made his first appearance, but had a bad start. With each take off, the breeze sprang up, so that they were all down wind. However, the fourth time proved it.

Radio, multi channel. The fellows from Sydney showed us how to do it. A demonstration was given by the multi chaps when they put 5 planes in the air at once, one of them being our own Maurie Dick.

The results are as follows; F.A.I. Team race. 1st. B. Eatber, 2nd. G. George, R. Hughes. B. Class. 2nd. R. Adamson, 3rd. G. George, R. Hughes.

Combat. 3rd. A. Williams.
Proto Speed. 1st R. Neville.

NATIONALS PROGRAMME

Canberra Model Flying Club and the twenty-five other N.S.W. Clubs welcome you to the 19th Nationals. We hope you have an enjoyable time in this, your own Federal Capital.

Tuesday 28th December. Processing. F.A.I.

Wednesday 29th December. F.A.I. Team Race. Junior and Senior. Senior and Junior Stunt. Round. 1. Control Line Scale.

Thursday 30th. December. Junior and Open A.I. Sailplane. Power. III. Duration. Junior and Open Hurl Glider. Free Flight Scale. Intermediate Radio. Grundig Trophy.

Friday 31st December. Speed All Classes Including Proto Speed II Junior Combat. Junior and Senior Stunt Round 2.

Saturday 1st January 1965. Nordic A. 2. Class 1. Power Duration. Open and Junior Rubber. Multi Radio.

Sunday 2nd January. F.A.I. Combat. Class 2. Team Race. Advertiser Trophy. Senior and Junior Stunt. Round 3.

Monday 3rd January. Jetex. Wakefield. F.A.I. Power. Single Radio. Radio Scale.

Tuesday 4th January. Open Combat. F/F Power Scramble. Presentation Dinner in the Hall at 7.30 p.m.

Champion of Champions

To be eligible for Senior or Junior Champion of Champions contestants must record flights in at least two of the three categories viz.: F/F C/L; R/C.

Points allotted for placings will be 3; 2; & 1. **Junior.** The Junior title will be determined by points gained in the six junior events. Points gained in other events will be counted only if a tied score results.

GENERAL: The Venue for the 19th Australian National Model Aircraft Championships will be: Camping, Processing C/L: Showground, Braddon, on Federal Highway 2 miles on Sydney side of civic centre on left going to Sydney.

Free Flight and Radio Control Venue: Adjacent to showground.

Alternate Free Flight Venue: 8 miles away on Cooma Rd., half-mile beyond last houses in Griffith A.C.T. (Not M.I.A.)

Alternate Camping Venue: (1) Black Mountain, 2 miles from Showground. (2) Caratel opposite showground.

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SELL, unused O.S. Single Channel Outfit, 2AP-27 Transmitter, 4A2 Receiver, 2 Claw Standard Escapement £27; also 1A Receiver £10. Will bargain. Bradney, 108 Rawson Rd., Guildford, Sydney.

FOR SALE, Single Channel Gear, as new. OS, TX, II, Transmitter (fully transistorized), Silvertone Relay Receiver, Hinode Compound Servo, O.B.M. Miniservo. All half new price. A. J. Potter, Box 6, Gol Gol, via Mildura.

VALUE Used OS 10CH S/H, TX and RX for quick sale £60; also ten used Transmitters, S/N and Trim, at £10 each. All maintained as new. Plus, 3 new S/N Transmitters £13 each. Reason for sale — need deposit on new proportional system. Contact Barry Angus, Hotel Victoria, Malop Street, Geelong, Victoria.

WANTED, Used Six Channel Transmitter and Receiver. B. Greed, Nunn Street, Benalla, Victoria. All letters answered immediately.

FOR SALE, 40 MC/S 10 Ch. Silvertone TX and Relayless RX, five Bonner Duramites fitted with Kraft amplifiers. Outfit recently completely rewired and checked. Complete with DEACS, switches, etc. £100 o.n.o For particulars contact Owen Badcock, Moriarty, Tasmania.

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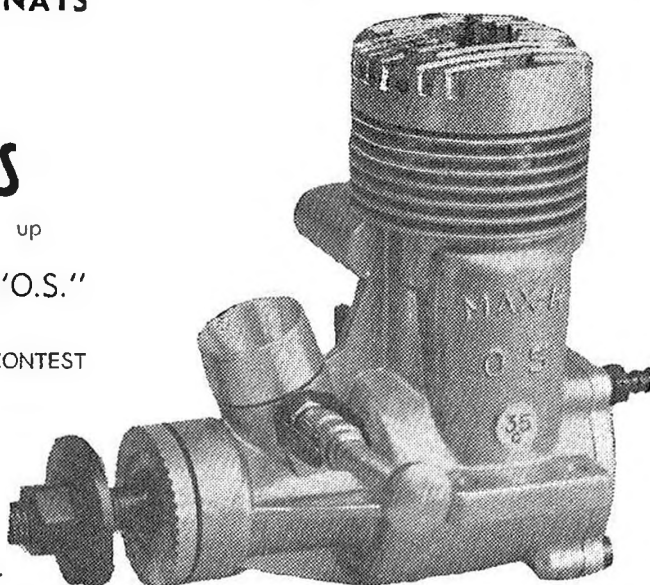
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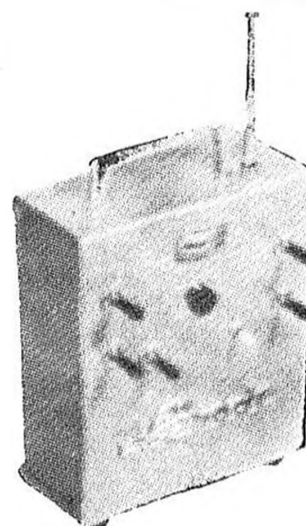
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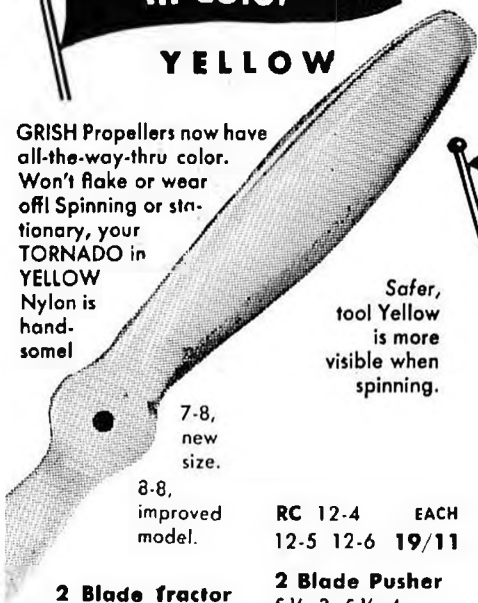
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2 Blade Pusher
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6-3 6-4 3/6
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11/6
8-6 8-8
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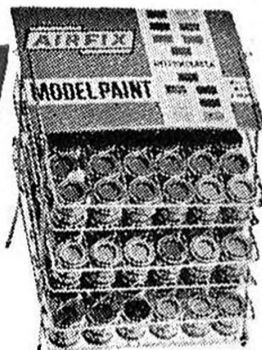


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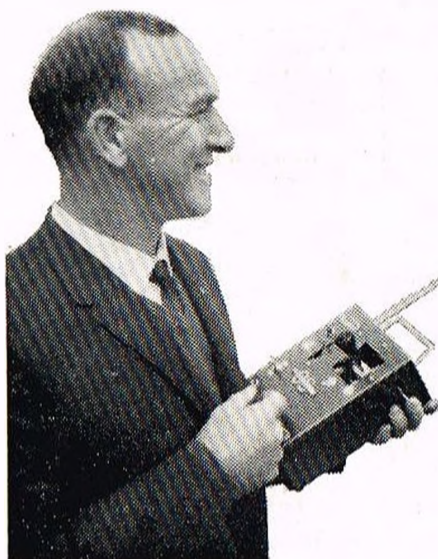


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