Model News

AUSTRALIAN & NEW ZEALAND MODELLING

FEBRUARY
1964

REGISTERED AT THE G.P.O. SYDNEY, FOR TRANSMISSION BY POST AS A PERIODICAL.

BABY BIRD ★
PROPELLERS FOR SPEED ★
ANNUAL CUMBERLAND CHAMPS ★

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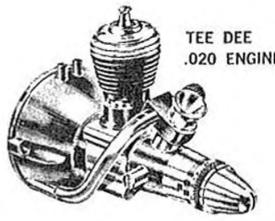
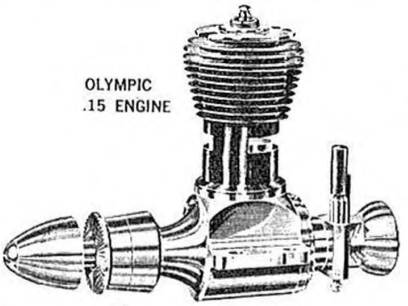
2/- STERLING


TEE DEE .020 ENGINE


TEE DEE .049 ENGINE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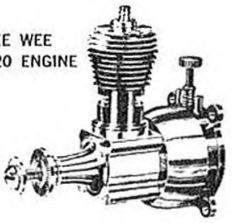
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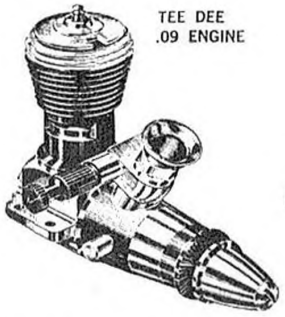
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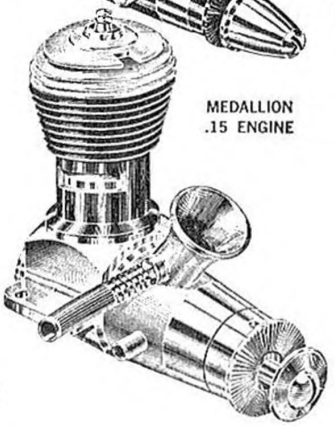
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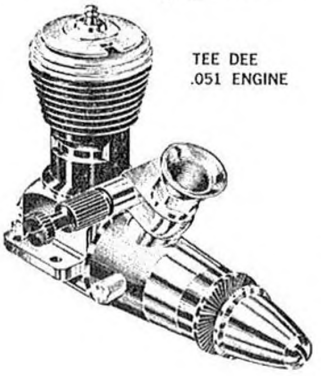
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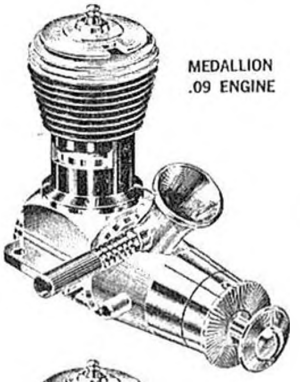
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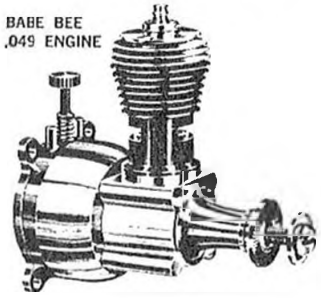
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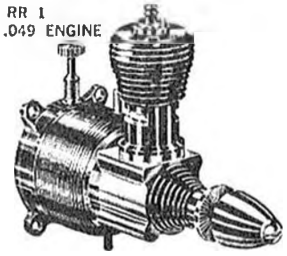
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MODEL NEWS

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CONTENTS

NEXT ISSUE MARCH-APRIL

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

Cover Story: Left to right: Ian Watts (Gee String), Jack Bone (enlarged Hustler Delta), Barry Angus (Sterling Mustang), Ken Bowden (Multi Cicada) all well known Radio Control fliers with the M.A.R.C.S. of Melbourne.

News and Views

OLD TIMERS' CONTESTS POPULAR

These have proved so successful that the Northern Club, of Melbourne, is to sponsor another early this year. The E.S.M.A.C. Club is to run a Veteran Contest of Free Flight and now we hear that the Stuntmasters will be running a Vintage Stunt contest and controlline scale day. Date to be notified, but it will be early in the year.

Vintage Stunt rules are. Pre-1950 design, flapless models. Bona fides from magazines or kit plans or Aeromodeller Annual model tables, plus pictures. 1948-49 S.M.A.E. Stunt pattern will be used. Models using pre-1950 motor, diesel or spark will receive 50 extra bonus points.

We hear of an Anderson powered Super Zilch already on the way (I wonder who), and also a big daddy Stuntwaggon.

BIG DRIVE FOR NATIONAL RECOGNITION

American A.M.A. officers for 1964 are working closely with the Hobby Industry Assoc. Federal Communications Commission, Federal Aviation Agency, U.S. Navy, National Assoc. of Rockerty, National Aeronautical Assoc. F.A.I., and the Modelling Press. Also, new efforts are being made to develop closer ties with the U.S. Air Force, National Aerospace Educational Council, National Exchange Club and even Congress. All this activity will strengthen Aeromodelling in general and may eventually throw off the "toy" label so frequently applied to models and establish modelling as a responsible activity deserving of National recogtion and support.

Address all Correspondence to the

EDITOR, 11 WEST KING STREET, SOUTHPORT, QUEENSLAND.

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ON TOP OF KOSCIUSKO

An attempt was made during mid winter by K. Berry to fly on top of Mount Kosciusko, Australia's highest point. This is impossible during the summer because of the stony nature of the ground. However during the winter the summit is packed with a couple of yards of snow, and provides a good surface. He was able to get in a couple of laps at 18 inches altitude. The air was too thin for the motor to run well and the fuel too thick due to the cold. The temperature was 27 degrees below freezing.

MODELLERS DON'T COUNT

The following was taken from the Auckland M.A.C.'s news sheet. At a recent flying display a young chap tried to fly before the crowd was cleared away. Luckily the person he hit was not hurt and was a modeller anyway!!

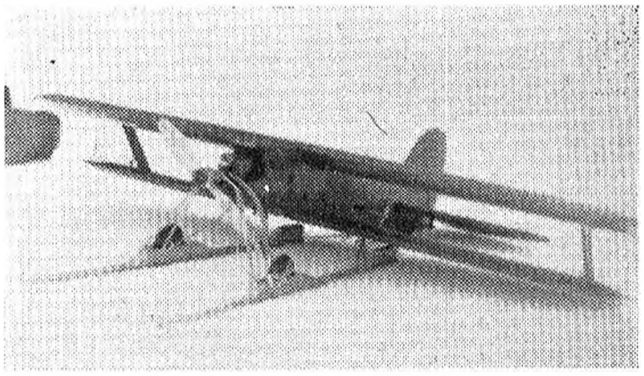
The need to fly safely cannot be stressed enough. Three accidents were reported to "Model News" last month and they all involved experienced modellers.

EARLY COPY

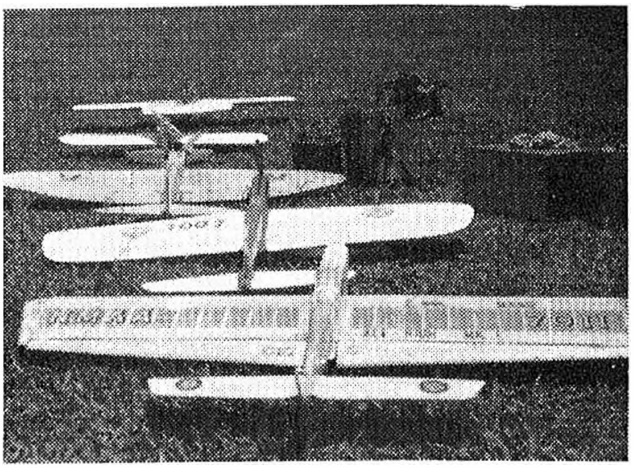
News, articles, advertising, etc. for the March-April edition of "MODEL NEWS" should reach us as soon as possible after the appearance of this issue. This will help to avoid the last minute rush and allow us to use your copy to its best advantage.

FRESHMAN'S CONTEST

The Stuntmasters of Victoria have indicated that they will again conduct a stunt contest for the not so expert stunter about the middle of the year. The 1963 contest proved very successful.



K. Berry's O.S. 29 powered Bi-plane. Specially built for an attempt to fly on Australia's highest mountain. Large prop needed to get a bite on the thin air. Was only able to obtain an altitude of 18 inches for a few laps.



What makes this line up of stunters different? They are part of the stunt line up at the M.A.A.Q. No. 1 Silenced Stunt elimination. The M.A.A.Q. has proved that such contests are successful. No silencer—no fly. Model No. 7007, by Don Wood, has already won the Qld. State Championships fitted with a silencer.

(Photo by Arthur Gorrie, one of the staunchest supporters of Silencers).

GREEN DRAGON

Old timers will recall the Green Dragon of 1948, designed by the immortal J. C. Madman Yates. The original used an Orwick 64 spark ignition motor and had only about 500 sq. in. wing area.

At the conclusion of the Suntmasters' Championships, Monty Tyrrell gave a demonstration flight of Trevor Woolnough's Green Dragon. Its wild and woolly antics were an eye-opener, and a classic example of two has beens operating together.

COMING CONTESTS

Clubs intending to run contests, field days, championships, etc., should notify "Model News" as soon as possible after the date has been decided upon so that the date can be published as soon as possible. If you want a big roll up at your field day, give the Modeller who has to travel long distances as much notification as you can.

BEENLEIGH FREE FLIGHT CONTEST

An M.A.A.Q. sanctioned contest has been approved and will be conducted by the Newtown Model Aeronautical Association at Beenleigh on 9th February.

Events: Open Power, Open Sailplane, Scramble, Chuck Glider.

Further information from P.R.O. A. Gorrie, 604 Stanley Street, South Brisbane.

Old Timers Contest

By Ford Lloyd

On November 17, 1963, in near perfect conditions the Northern Club of Melbourne conducted a very successful "Old Timers" contest at the Laverton F/F field.

For many of the younger flyers present it was probably their first opportunity to see replicas of models that made history when spark ignition motors were in their heyday; and for the older modeller it was a reminder how much free flight design has changed over the years with the advent of the high performance Glo-motors and advances in model aeronautical knowledge.

Originally it was intended that this contest would be confined to members of the Northern Club. However, such was the interest that the meeting was opened to all comers.

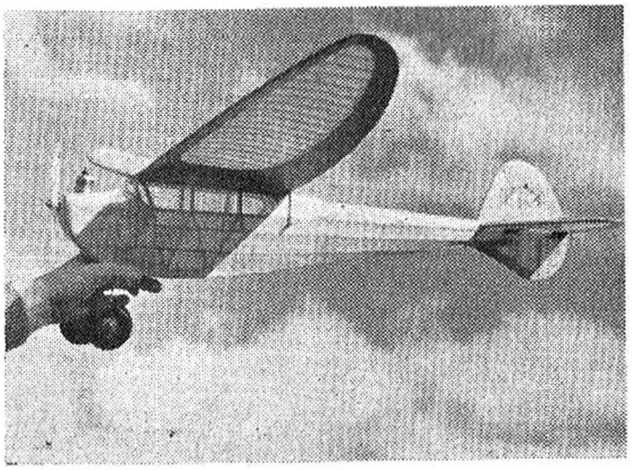
The first casualty was Monty Tyrrell who had trouble with a well built Miss America powered by a very new looking Anderson Spitfire, and after damaging the stabiliser in a trimimng flight Monty joined the ranks of the spectators.

John Wynn's nicely built O.S. 35 powered "Cloud Cruiser" hand glided well but powered flights revealed the need for further trimming and after a near disaster the model was retired for another day.

Ron Sharp also had difficulties in handling his "Westerner" and was unable to compete. It was left to Gordon Bradford to start the meeting rolling by making the first official flight with his O.S. petrol powered "Bowden Meteorite". This model literally jumped into the air and soon gained sufficient height for a respectable flight. However the glide was rather stally and the model eventually landed on the road and damaged the engine enough to rule out any further flights.

Bob Greenhill was next away with his 10ft. "Nimbus" and although the take-offs were graceful it lacked the power to grab sufficient height for a maximum flight. As the accompanying photo shows this model is beautifully built and we understand Bob intends to eventually rig the model up for radio control.

Ford Lloyd's "The Answer" did not perform as well as it has during the early morning trimming sessions prior to the meeting and possibly the hastily installed engine timer helped to reduce the usual floating glide. It was left to Jim Fullarton to provide the performance of the day.



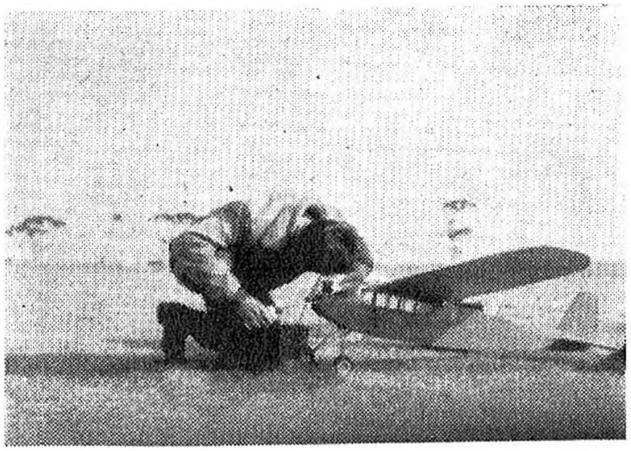
Ford Lloyd's "The Answer", designed by Scotty Murray. 44" wing span of Ritz construction. O.S. Pet. 9 by 4 Tornado prop. 17 ozs. weight and second place.

The take-offs from the lake adjoining the F/F field were a sight to gladden any modellers heart for the model slowly accelerated then skimmed the water and spiralled gracefully into a very blue sky to demonstrate that this seaplane could fly well despite the pylon mounted moto, floats, etc.

This veteran model made its first flight off water at Rose Bay in Sydney early in 1940. At that time it was powered with a Baby Cyclone; later on it was fitted with a Mighty Midget and then retired until the end of the war. When Jim shifted to Melbourne the model was recovered and sponsons fitted instead of tip floats and it now sported a Brown Jnr. Over recent years the model has been flying at some of the Bayside beaches with a

Jim Fullarton launches on his winning flight. Own design, 5' 6" span, weight 2¼ lb. and now fitted with an O.S. 15. Note the snake gaiters.

Bob Greenhill's "Nimbus". 10ft. span. Powered by a Glow Chief .45, 3rd place. Beautifully built.



Monty Tyrrell with his Anderson powered Miss America of 1935 vintage. The Anderson 65 had too much power for this old timer.

Sabre 2.5 and of late with an O.S. 15 that Jim has retired from an F.A.I. power model.

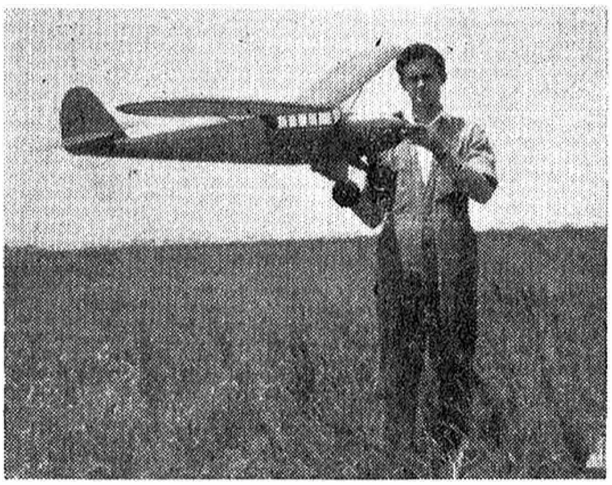
After all the scores had been toted up Jim Fullarton was awarded first place with 118 points, a fitting reward for a veteran modeller and model. Ford Lloyd took second place with 110 points and Bob Greenhill came third with 101 points.

The success of this first attempt to stage an "Old Timers" has encouraged the Northern Club to sponsor another meeting in 1964 and we understand the E.S.M.A.C. Club will also include a veteran contest in one of their free flight days. So if you are a Victorian modeller and have a Brown Jnr. or Anderson Spitfire tucked away somewhere or even a lowly diesel will do, why not build a "Miss America" or "Gas Champ" and rediscover the thrill of flying a model that looks like a real aeroplane and not a flying pencil.

Other States could spark off their own meetings and as a guide the following are the rules used this year.

Design to be pre 1942 (three views to be supplied); model to be full sized external dimensional representative of original.

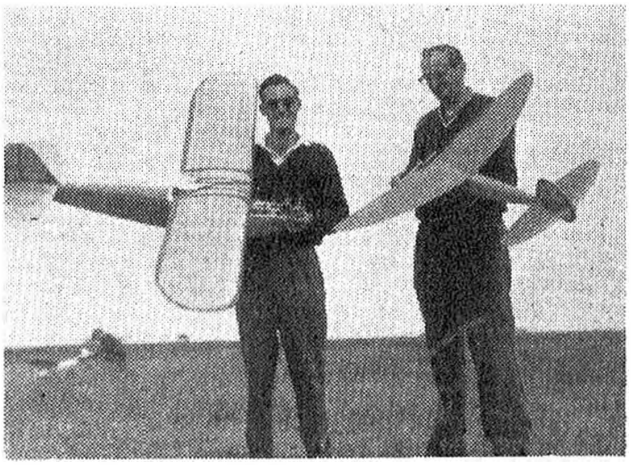
Or, model to have been built prior to 1942 (fact to be established).



S. Sharpe with his Glow Chief 35 powered "Stopper" by popular pre-war designer Elbert Weathers.

Fidelity to drawing, 10 points; workmanship, 30 points; coil ignition, 10 points; take-off (land or water, 15 points; flight time, max., 180 points. Motor run not to exceed 20 seconds. Flight time to start from instant of release. Best of two flights. Three attempts per flight. An attempt is defined as a flight not exceeding 30 seconds. Model must R.O.G. or R.O.W. to qualify.

The Northern Club will conduct another old timers contest early this year. Start building now. Details later.



John Wynne with his 1937 Cloud Cruiser and Max Nicol with Ford Lloyd's "The Answer" of 1941.

The Northern Club will conduct another old timers contest early this year. Start building now. Details later.

How To Get Started In Class 2 Team Racing - Part 2

(BY DAVID KIDD)

Having built and test flown your new team-racer, the chances are that its performance was not outstanding. Now, by selection of the best plug, fuel, and propeller, and by practising quick pitstops, the performance must be raised sufficiently to give you a chance of winning, which is I imagine, your main aim in this event.

TEST EQUIPMENT:

A reliable stopwatch is absolutely essential if you want to be able to extract top performance. The variations in speed that occur with different combinations may be so slight that they are often difficult to detect, so judging the speed by inaccurate means such as with a wrist watch or by the sound of the motor can be misleading to say the least, and can lead to many false conclusions. Even when speed is measured accurately another thing to bear in mind when comparing say a range of different props, is that changes in weather conditions have a marked effect on a model's performance. For this reason you can only compare the performances if the tests are all done at the same time, not spread over days or weeks under different conditions. Even in the space of a couple of hours a difference of several m.p.h. and laps can show up.

Of course laps should always be counted when making any comparisons, as these too are important in teamracing.

GLOW PLUGS:

The best plug to use will largely be determined by the fuel you decide to use, and of course the motor. Testing all likely possibilities is the only way to be sure.

We found that a long reach O.K. plug was the best both for speed and long life in our O.S. 29, the only trouble being that on cold days the motor wou'd tend to cut without warning unless it was thoroughly warmed up, as the plug was definitely on the cold side. An O.S. No. 3 is hotter and we used them for some time although their life was rather short and it was often a matter for speculation as to whether they would last the race out or not. The No. 6 idle-bar has a long life, but always seems to lower the speed.

The ETA 29 seems to like very cold plugs, and the K. & B. long reach appears ideal in this case. Surprisingly, the K. & B. plugs failed quickly in the O.S. but just go on and on in the ETA.

PROPELLERS:

Prop. sizes are pretty much standardised, fortunately, and something like an 8 x 8 or 8 x 9 won't be far wrong. The 8 x 8 Tornado nylon has worked well on so many models that it is an obvious first try, especially as it is far safer from breakage than the wooden variety. Careful selection of a wooden prop will nearly always result in a few more m.p.h and laps though, and this is an advantage that can not afford to be ignored if competition is tough.

John Crombie's Class II team racer, "Piggy-farmer", former N.Z. record holder over 160 laps. This model has approached six minutes in practise over the new 140 lap distance.

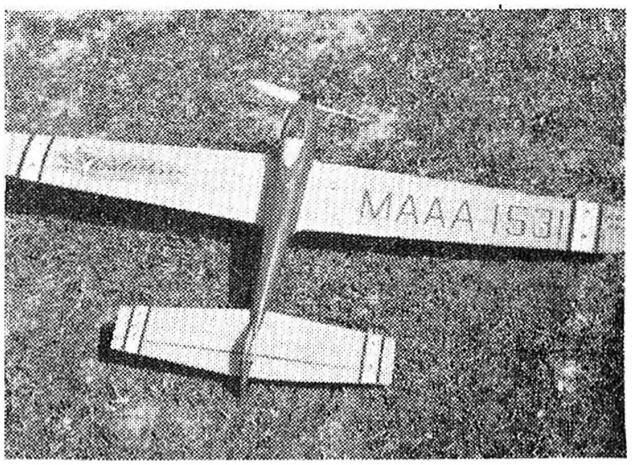
An 8 x 9 Stant was found to be a very good prop when cleaned up, balanced, enamelled, and polished, and so too was the New Zealand Whirlwind 8 x 9. Despite testing dozens of props I have yet to discover a prop that would beat these two. However as with most other things, what has worked for one will not necessarily work for another, and the only way to be sure you are using the best for your model and motor is by exhaustive testing. With a model that is clean, dragwise, a great deal of blade area simply is not required, hence our success with the fairly narrow bladed Stant and Whirlwind. Models that are not quite so efficient may well perform better on a prop with wider blades or larger diameter.

In all cases, the inner half of a prop blade is less efficient in producing useful thrust than the outer portion, and for this reason I believe in reducing blade area as much as possible towards the hub, consistent with strength requirements. Other modellers may not agree with this, especially those who have had success with the Grish nylon speed props, which of course increase the blade area towards the hub.

It is a mistake to think that by using a bigger prop to slow the motor down, an increase in range will be achieved. Quite often the reverse is true; by using a smaller prop and allowing the motor to run in the rev range where it develops peak power, both speed and laps can be improved.

FUEL:

This is traditionally a subject cloaked in secrecy, and yet it is surprising just how many races are won on fuels containing only three basic additives: Nitromethane, nitrobenzene, and benzol. By juggling the percentages, of these three ingredients many combinations of speed and laps can be ob-



Ron de Chastel's F.A.I. team racer, powered by an E.T.A. 19. Took out first place at Thunderbirds T/R day.

tained, together with easier starting than that obtained on straight methanol-oil mixtures. However it does take a lot of practical experience to know just how much of each to use under a given set of conditions.

Nitromethane: This is added to increase power and speed and usually does so at the expense of laps, although it is used even in long range brews to keep the speed up by helping to burn the other ingredients quickly and efficiently. It has been difficult to get lately, and nitroethane has been tried as a substitute. This is less potent than the nitromethane but is better than nothing, 20% being a good quantity to use.

Nitrobenzene: This helps other ingredients to mix, and also helps both the speed and laps along to some extent. Many of the top overseas brews use little or none of it.

Benzol: This is added to increase the range, and so effective is it that the laps may be doubled in some instances. Its use is not new; it was being put to good effect in Australia before I ever took up teamracing, and in England long before that. Added alone, benzol will lower the speed, but used in conjunction with the nitros mentioned above it is possible to obtain extra laps with still greater speed than that given by straight methanol-oil blends. However in large doses, say above 20%, benzol causes trouble. It crunches plugs, makes starting difficult (although smaller amounts improve it), causes models to catch fire at pitstops, strips paintwork, etc., etc. In fact it is a most unpleasant ingredient, despite its performance!

Our efforts to find a better lap ingredient than benzol has not been very fruitful to date, but theory would indicate that improvements do exist and experiments along these lines are continuing. Petrol for instance is one of many we have tried, and whilst in some respects it may be a bit better than benzol, its overall performance is not sufficient to justify its use. Iso propyl benzene (cumane) as recommended by Ron Lucas in England has already proved its worth, and there would seem to be one or two others, equally as good. Annoyingly enough, what works well in one motor will not always do so in another.

Oil: Between 20% and 25% Castrol M is generally used. Some characters get away with as little as 15%, but speed and engine life suffer. Never use medicinal castor oil.

WARNING:

The liquids mentioned above, and others commonly mixed in fuels are poisonous and should be used with care. It is not necessary to swallow some of them to be affected; they can penetrate the skin, or be inhaled as vapors and accumulate in the system causing blindness, chronic illness, or even death. Avoid contact with them as much as possible!

TYPICAL FORMULAE:

Fuel formulae are usually expresed in percentages by volume. A 100 ml. measuring cylinder is handy and accurate enough for mixing glow fuels, although with a bit of arithmetic other systems can be used.

An often used fuel that is good for 50 laps with an economical motor is:

20% oil, 10% nitromethane, 10% nitrobenzene, 10% benzol, 50% methanol.

If you are getting 60 laps with this, you will probably manage 70 at about the same speed on:

20% oil 10% nitromethane, 15% nitrobenzene, 20% benzol, 35% methanol.

More benzol than this starts to get tricky. With a thirstier motor it is better to stay with the lower lappages, making up for this with high speed and quick pitstops. Iso propyl alcohol can be used in large amounts without causing fire hazards at pitstops, and is used in the following fuel, which works well in the ETA 29:

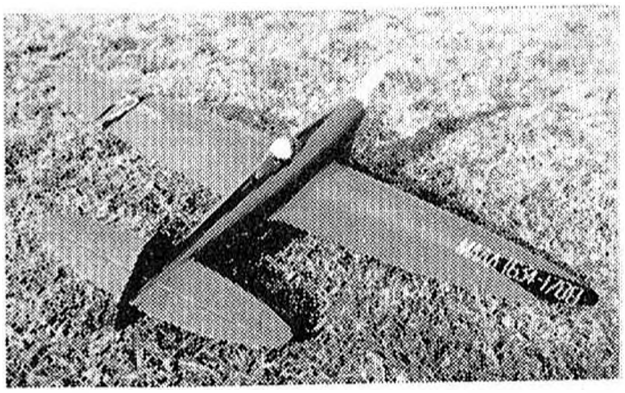
25% oil, 25% nitromethane, 25% iso propyl alcohol, 25% methanol.

This will give over 35 laps if the engine is used with the standard fuel jet, or nearer 50 fitted with a rangebar. For further concoctions I suggest you refer to some of the excellent articles appearing from time to time in the English magazines.

CONCLUSION:

If this article has helped someone, somewhere, to a better understanding of Class II teamracing, then several pages of Model News will not have been wasted. I sincerely hope not. Should there be any B Class enthusiast who would like to write, particularly from overseas, the address is:

143 Linacre Road,
Hampton,
Melbourne,
Australia.



A new Class B team racer, by Andrew Kimonides and David Kidd. Powered by an E.T.A. .29.

Annual Cumberland Champs.

P.G.F.C. again held its Annual Free Flight Championships this time on the new field at Camden. The weather was excellent with the drift mainly from the north east. There were good entries in all events and a total of 26 competed in the Free Flight events and 12 in single radio.

OPEN RUBBER

Was well contested with Brian Beashel and Arthur Butler contesting a fly-off. Arthur proved to be the most consistent; third place went to R. Murray of Canberra.

OPEN SAILPLANE

There was not as many Max's in this event but the placegetters all received two Max's each with 165,133.58 being the deciding times. Colin Cox placed first with Keith Murray second and Allan Edwards third.

OPEN POWER RATIO

Although the weather was good there were few Max's in this event, one example was K. Murray's first flight, he had very good height after seven seconds but was down in 60.8 seconds. Arthur Cooper was the most unfortunate, his second flight was a max. off 60 seconds his timer jammed. A. Edwards won with 16:32.1, K. Murray second with 15:05.1, and Colin Cox with 9:05.1.

CHUCK GLIDER

Dave Hegarty proved the master in this event with 106 seconds; this was probably Dave's last Chuck Glider event, his arm has a crystal. R. Murray was placed second with 148 seconds and B. Beashall third with 143 seconds.

JETEX

Dave Hegarty won this event with 455 seconds. Les Fahey was second with 374 seconds. Les was unlucky—his model landed in water and was out of trim in his remaining flights. Brian Jones was third with 176 seconds.

SCRAMBLE

The conditions by the time the scramble started were a little more breezy but was well contested with 12 flyers. G. Eglentals won from B. Wallbridge second and R. Murray third.

SINGLE RADIO

Was well organised and was contested by 12 flyers. The places were L. Winley 1, J. Marquette 2, R. Ewers 3.

Brian Jones with his A/2. Brian placed 3rd in Jetex and 6th in sailplane.

The best junior was Greg. Fahey.

Dave Hegarty was the most consistent flyer on the day and received the Champions Trophy, with six points.

Clubs represented were P.G.F.C., M.F.F.C., Doonside, Macquaries, Canberra, Olds, R.C.M.C., Cumberland Radio.

The places and times were:

Open Rubber: A. Butler 540 plus 182; B. Beashel 540 plus 97.2; R. Murray 462; A. Edwards 408; D. Pope 364; G. Fahey 235.

Open Sailplane: C. Cox 525; K. Murray 493; A. Edwards 418; A. Cooper 371; R. Towell 342; B. Jones 243.

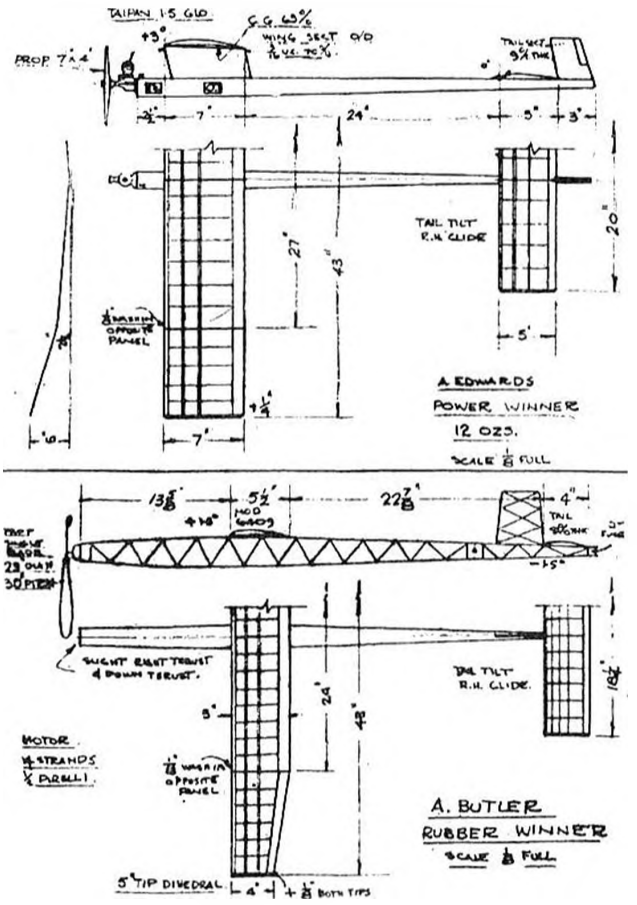
Open Power Ratio: A. Edwards 16.32; K. Murray 15.05; C. Cox 9.05; A. Cooper 8.9.

Chuck Glider: D. Hegarty 160; R. Murray 148; B. Beashel 143; K Murray 112; V. Cavanagh 100; G. Eglentals 99.

Jetex: D. Hegarty 455; L. Fahey 374; B. Jones 176; K. Murray 170.

Single Radio: L. Winley; J. Marquette; R. Ewers.

Scramble: G. Eglentals 811; B. Wallbridge 778; R. Murray 713.



Multi Events at the 17th Nationals

If the standard of flying, models and reliability displayed in this, the first event at the 17th Nationals, is maintained, everyone will be treated to a series worthy of Australia's best aeromodellers.

The multi event showed that this section of the hobby has progressed to a stage where the reliability of the equipment is taken for granted. As in the early days of Stunt, being able to do the full pattern in the correct position relative to the judges, is the deciding factor.

While only nine competitors actually flew in the event, there was not one crash and none of the contestants found it necessary to look at their radio gear.

The only crash for the day occurred late in the afternoon during general flying when Barry Angus, of Vic., tried to pull out from inverted at too low an altitude.

The weather was almost dead calm all day, and it is interesting to note that every landing was right on the mown take off strip, either an "Inner", "Outer" or close in.

Flying order was Farnan, Healy, Watts, Angus, Nilan, Marquette, Winley, Murray and Prosser.

Tom Prosser, who was the eventual easy winner, put up too very good flights. The first of which was the best we have seen at any Nationals in Australia. He flew at about 40 ft. altitude and looked as if he had the Sultan on a string.

Basil Healy scored second place with two full patterns of safe flying. He also used a Sultan. Tom Prosser used home made 10 channel gear with extra kick up elevator. Basil Healy used Silvertone Super Regenative 10 channel equipment.

Third place went to Doug. Murray, of W.A., flying a G-string instead of his usual "Stormer". He put in two full patterns but was well out of form due to lack of practice. Murray flew with O.S. Superhet 10 channel gear on band 5, which is 27.195 megs.

Barry Angus was flying a "Stormer" smoothly, but did not quite complete either flight, due to his motor stalling, leaving him with only enough points for fourth place.

Scene in the pit at the Nats. Multi : Top model, D. Murray's "G.-String"; next, B. Healy's "Sultan"; next, T. Farnan's "Stormer"; next, W. Nlyans "Big One".

Tom Prosser, winner of Multi event at the Nats. with his "Sultan". Note the flying field.

Fifth place went to John Marquette. He scored steadily in two long flights with a Sultan. Of the two strongest Multi States, N.S.W. mainly favoured Sultans, while all the Victorians used long nose Stormers.

Tony Farnan, who was expected to chase Tom Prosser, came a disappointing sixth. His motor ran lean and cut one-third of the way through his first flight and three-quarters of the way through the second. He flew a long nose Stormer with O.S. Superhet 10 channel gear on band 1, 26.995 megs.

L. Winley, of N.S.W., flew his Astro Hog in a very safe and confident manner, and we still think an Astro Hog is one of the prettiest models in the air.

The contest finished about midday. Immediately after Prosser, Farnan and Murray flew together to provide what was probably the most spectacular multi flying yet seen in Australia.

They turned on everything in the book, plus a few extras all at zero feet. They flew together for three successive flights. The three planes would fly in formation just above the crowd's head, then "bomb-burst" upwards in victory rolls and plyon turns.

Tony Farnan flew inverted continuously for more than 10 minutes, roaring up and down the strip at about 4 ft. altitude, climbing slightly at each end to clear the ropes and onlookers.

Doug. Murray's immelman take-offs were around one beach umbrella and underneath two others.

This style of flying proceeded for the rest of the afternoon. Many modellers previously non-believers in radio control, went away muttering "Multi is the answer".

Multi radio results : T. Prosser 10,818 points, 1; B. Healy, 8,796 points, 2; D. Murray, 8,099 points, 3; B. Angus, 7,559 points. 4; J. Marquette. 7,484 points, 5; T. Farnan, 6,788 points, 6; L. Winley, 6,148 points, 7.

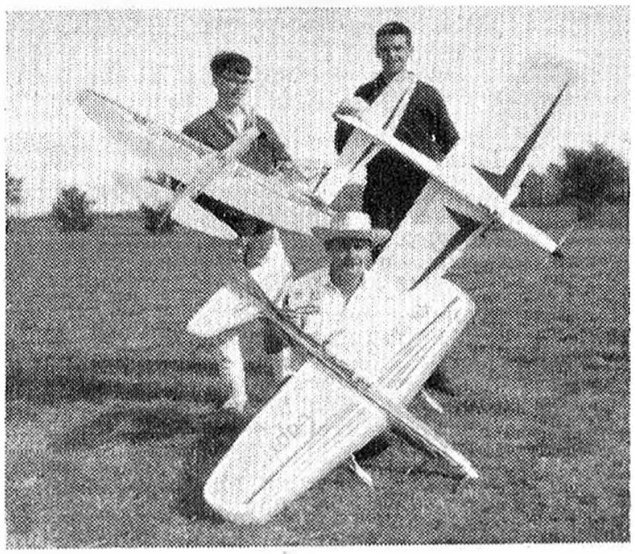
The Stuntmasters Championships

This was an experts' event and was run to the A.M.A. rules.

The weather was kind; the entry list was disappointing. The club felt that the A.M.A. pattern had discouraged a few from turning up. It is harder than the F.A.I. pattern. This was regarded as a poor outlook as few had flown it anyhow and we will have to eventually adapt ourselves to it, in all probability.

The Stuntmasters did not set a good example in the muffler department. Only one utilised such a device so credit must go to Bob Howard for the use of an O.S. muffler on the Merco 35 in his semi-scale Ryan St.

It is apparent that heavy planes are not very effective for the A.M.A. pattern with extra square loops, square horizontals and hour glass. John Reilly was convinced of that. His semi-scale Lockheed U-2 is a good performer in any circles but

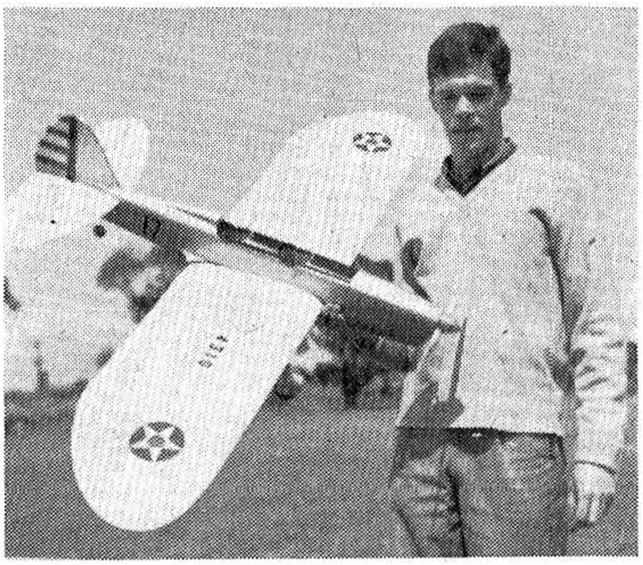


Placegetters: Centre, Ken Taylor, 1st; 2nd, B. Birch, right; B. Stretch, left, third.

its heavy weight told. He had the O.S. 35 really howling well but it was evident a lighter version would have been much better suited to the motor. He had two good flights with good motor runs but the roundness of the squares cost him a lot of points. Brian Birch was not so worried on this score as he used a Merco 49 on a four stroke in his original design. Ken Taylor was the same, as his Enya 45 proved quite effective. So it would appear that the bigger motors are necessary if the planes are going to be heavy. We will agree light wing-loading is the thing, but if you don't have it the bigger motors are better to use.

Trevor Woolnough will do better when he slows down a bit as hi-speed stunt flying is not the best way to go about the A.M.A. pattern. Same goes for Ken Dowell, though in his case he was flying a reserve model due to splashing his good ship the day before. As a point of interest he flew the only .15 in the contest. The others were all .35 to .49 powered stunters.

Brendan Stretch would have done better had he been able to get in both flights. His one and only flight was his first attempt at the A.M.A.



Well built semi-scale 55" 19 Merco 35 powered stunter by Bob Harold.

pattern and his Merco 35 T'bird was full of possibilities. However, the controls played up shortly after round one so he withdrew from the other round.

Generally the club was pleased with the way the first Masters' Tournament went except for the non-arrival of some of the other hot Victorian stunt merchants.

Results: Ken Taylor (Enya 45 Original) 571½, 1; Brian Birch (Merco 49 Original) 545½, 2; Brendan Stretch (Merco 35 Thunderbird) 532½, 3.

Judges: John Elliott, Monty Tyrrell.

Recorders: Des Stretch and Dan O'Connor.

Trevor Woolnough with his Barracouda.

New Zealand Labour Weekend Rally

Conducted by Tamaki M.A.C. and Reported by Steve Townley

Modellers from Roskill, Auckland, Hamilton and Taurauna attended and made it one of the biggest and best attended contests held in the Auckland area for a long time.

SATURDAY: Class A and B Team races and Stunt were flown. Class A opened the contest and got away on time.

The Class A final saw Thomas, Guy, Baker and Scrimigour in the circle. Provincial record holder Thomas with his Eta Mk. II and Reguflo tank was first home but on testing his tank was found to be .6 c.c. oversize.

The results now stand as follows: N. Guy (Roskill) 5:57.2, 1; K. Scrimigour (Roskill) 6:08.0, 2; M. Baker (Roskill) 7:23.5, 3.

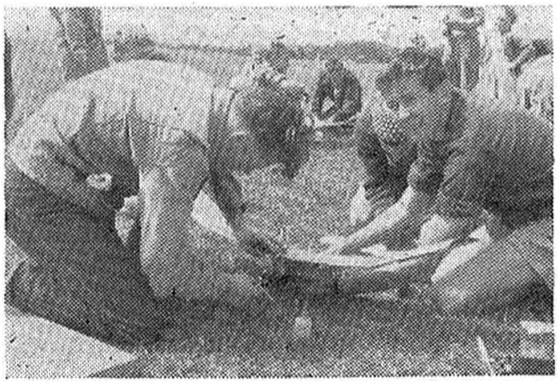
B Class: Laps were down a bit but speed was a little higher than usual. The final was flown at a very fast pace with Townley keeping ahead of Guy's model and Keegan finishing ahead of Hewitson about two minutes later.

Result: S. Townley (Tamaki) 7:55.6, 1; N. Guy (Roskill) 8:06.0, 2; B. Keegan (Auckland) 10:02.3, 3.

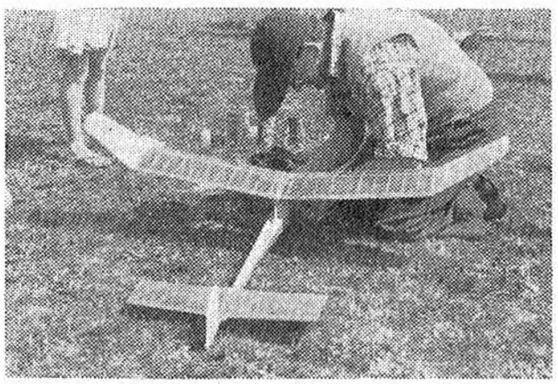
Stunt: The flying standard was very high. D. Tristram flying an O.S. powered Warburton U/2 won from fellow Papatoetoe stunter Bruce Thomas also flying a Warburton design. Noel Hewitson filled the minor placing.

SUNDAY: Flying was at R.N.Z.A.F. station Hobsonville. The day was windy and conditions unpleasant. Most of the Payloaders were .8 c.c. powered and American influenced. The Chuckglider championship was well supported and the first four places went to "Zingaros". These are very big models and it takes a lot of power to toss them up.

Towline glider was highlighted by whistling towlines and flexing wings. Rubber attracted only two entries, the same as Radio Control.



Noel Hewitson, veteran New Zealand Aeromodeller, with his payload entry.



N. Hopley's proxie flown payloader. N. Guy and S. Hopley trimming.

Payload Championship: N. Hopley (Roskill) 303.7 secs., 1; R. Fleet (Auckland) 227.6 secs., 2; N. Hewitson (Auckland) 31.2 secs., 3.

Chuckglider Championships: G. Bowden (Roskill) 246.0 secs., 1; M. Elmore (Roskill) 230.3 secs., 2; C. Sleep (Roskill (190.6) 3.

Open Towline: G. Bowden (Roskill) 351.9 secs., 1; L. Cowley (Hamilton) 260.8 sec., 2; L. Vincent (Tauranga) 162.2 secs., 3.

Open Rubber: A. Graves (Hamilton) 301.5 secs., 1; C. Sleep (Roskill) 172.3 secs., 2.

On the Sunday night there was a film evening at the Tamaki Mac's Clubhouse and some good films were shown by Steve Townley, Wynn Manson and Graham Beagley.

MONDAY: A light drizzle kept up all day. Not very heavy but everyone went home wet. The highlight of the 2.5 Combat was the heat between Smith and Caldwell. They scored more cuts between them than the rest put together. Smith went on to the final and came out duel winner against Stunt champion Denis Tristram.

Speed: This was flown on a percentage of the New Zealand record in the particular class you chose to fly in.

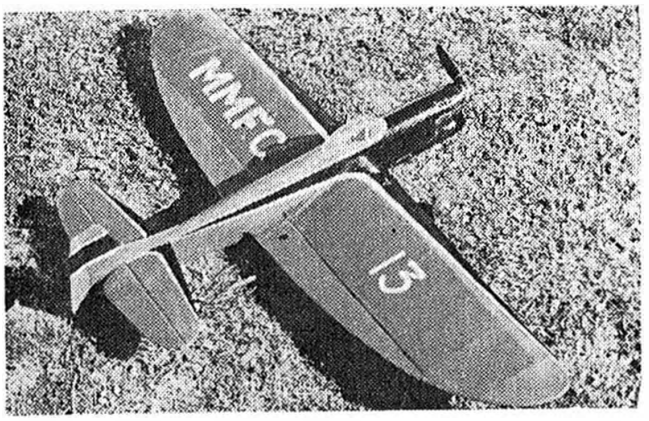
Denis Smith was the early favourite as a few weeks earlier he had broken the New Zealand Class III record with a speed of 129.6 m.p.h. However the best time he could return on the day was 107 m.p.h. to give him 83%. Townley's McCoy 60 powered missile recorded 126.7 m.p.h. to give him 85% and first place. Neil Guy's Enya powered clocked 103 m.p.h. for third place.

The three-day contest ended with the prize giving which everybody attended.

Results of New Zealand Nationals will appear in the next issue of "Model News".

"BABY BIRD"

Don Martin's Snappy Stunter for 2.5 to 3.5 Motors



BABY BIRD. A hot Stunter for .19 motors. Designed by Don Martin and powered by an Eyna .19.

Although seldom seen at major contests these days this class of stunter is still very popular and "Baby Bird" is one of the prettiest examples that we have seen for a long time.

Construction is quite straightforward as a study of the plan will reveal.

FUSELAGE: Cut sides from 1/8in. sheet and cut out for wing position. Cut balsa and ply formers. Bend and fit undercarriage to F2 with eye bolts. Fit F1 and F2 to engine bearers. Cement fuselage sides to engine bearers and cement together at rear. Fit remaining formers. Leave rest of fuselage construction till ready to assemble model.

WINGS: Build in usual manner. Add one ounce of lead to outside wing tip. Build in control platform to take standard C/L plate. Attach one end of a piece of 14 gauge wire to C/L plate for pull-push rod. Cover centre section with 1/16in. sheet leaving slot for free movement of pull-push rod. Slide wing through fuselage side and check for alignment.

FLAPS: Cut from 1/8in. sheet. Sand to a slight taper. Flaps are fitted to T.E. of wing with metal and linen hinges as shown on plan.

TAIL PLANE: Cut stabiliser and elevator from 1/8in. sheet. Sand smooth and taper to outside edges. Fit elevator horn in position. Hinge elevator to tail plane in the same manner as the flaps.

FIN: The fin is cut in two parts. Sand smooth and round edges. Join the two pieces together, cementing in the amount of offset shown on the plan.

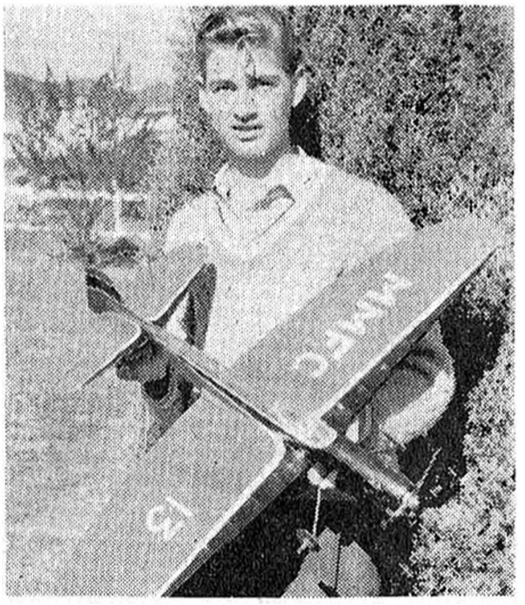
ASSEMBLY: Pin elevators and flaps in neutral position. Slot rear of fuselage to take tailplane unit. Position and check pull-push rod for length. Connect up control system. Solder washers on all free ends. Be sure that the control set up is 100% as after the top goes on the fuselage the control set is inaccessible. Recement all joints inside the fuselage and fuel proof the tank bay. Fit tank.

Shape the top of the fuselage from ¼in. soft sheet and cement in place. Sheet bottom of fuselage after fitting tail wheel. Shape cowling block to suit type of motor and spinner used. Slot rear of fuselage to take fin and cement in place. Sand completed fuselage down smooth rounding off all edges as shown. Recement all joints rubbing the cement in.

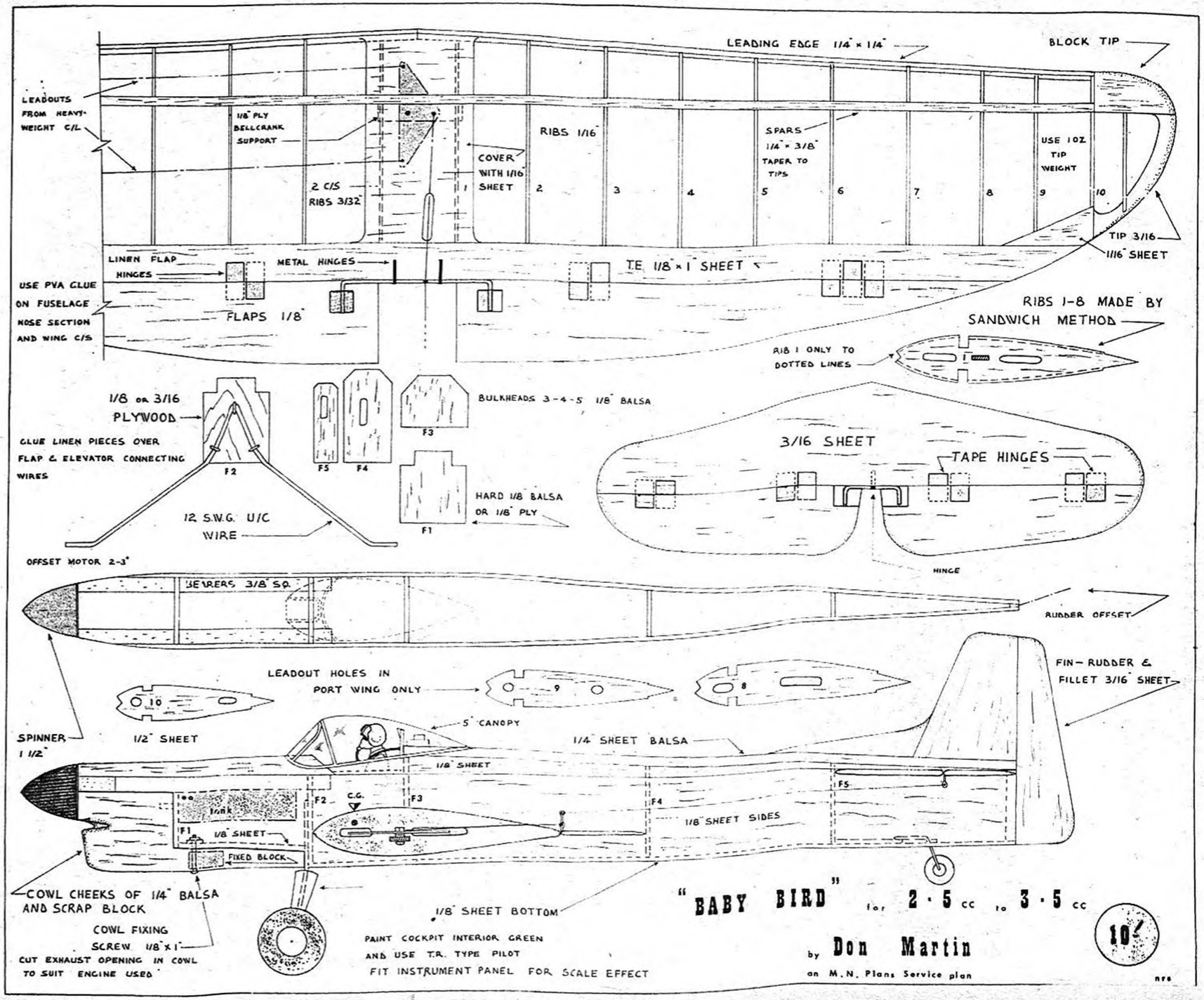
COVERING: Cover the fuselage with Modelspan. Dope onto the wood by brushing the dope through the tissue and smoothing out the wrinkles by hand. Put a few drops of castor oil on all hinges to prevent the dope from getting into them and sending them brittle. Cover the wings in the usual way. Give the completed model three coats of dope. When dry, fuelproof or paint the model to the colour you desire.

"BABY BIRD" can be powered by any good 2.5 to 3.5 c.c. model or Glow.

Aeromodellers, fly safely, fly away from power lines.



The builder himself, Don Martin, with his Babybird. It is not hard to guess the anscestor of this model.


LEADING EDGE 1/4" x 1/4"
BLOCK TIP
LEADOUTS FROM HEAVY WEIGHT C/L
1/8" PLY BELLCRANK SUPPORT
2 C/S RIBS 3/32"
RIBS 1/16"
COVER WITH 1/16" SHEET
SPARS 1/4" x 3/8" TAPER TO TIPS
USE 1OZ TIP WEIGHT
TIP 3/16 1/16" SHEET
LINEN FLAP HINGES
METAL HINGES
T.E. 1/8 x 1" SHEET
USE PVA GLUE ON FUSELAGE NOSE SECTION AND WING C/S
FLAPS 1/8"
RIBS 1-8 MADE BY SANDWICH METHOD
RIB 1 ONLY TO DOTTED LINES
1/8 or 3/16 PLYWOOD
GLUE LINEN PIECES OVER FLAP & ELEVATOR CONNECTING WIRES
F2
F5
F4
F3
BULKHEADS 3-4-5 1/8" BALSA
HARD 1/8 BALSA OR 1/8" PLY
F1
12 S.W.G. U/C WIRE
OFFSET MOTOR 2-3°
3/16 SHEET
TAPE HINGES
HINGE
BEARERS 3/8 SQ.
RUDDER OFFSET
LEADOUT HOLES IN PORT WING ONLY
FIN-RUDDER & FILLET 3/16" SHEET
SPINNER 1 1/2"
1/2" SHEET
5" CANOPY
1/4" SHEET BALSA
1/8" SHEET
C.G.
1/8" SHEET SIDES
FIXED BLOCK
COWL CHEEKS OF 1/4" BALSA AND SCRAP BLOCK
COWL FIXING SCREW 1/8" x 1"
CUT EXHAUST OPENING IN COWL TO SUIT ENGINE USED
1/8" SHEET BOTTOM
PAINT COCKPIT INTERIOR GREEN
AND USE T.R. TYPE PILOT
FIT INSTRUMENT PANEL FOR SCALE EFFECT
"BABY BIRD" for 2·5 cc to 3·5 cc
by Don Martin
an M.N. Plans Service plan
10/-

Propellers for Speed and Team Race Work

(By Andrew Kimonides)

GENERAL

The purpose of the airscrew is to convert the torque of the engine into a forward thrust. Airscrew thrust depends on the effective angle of attack of the blade and on the speed of revolution. As speed and team-race enthusiasts are only interested in obtaining the best performance possible, some careful work on propeller selection and modification will pay off very handsomely.

Theoretical considerations provide the basic elements for choosing the right propeller for a job, but these considerations are beyond the scope of this artcile. Naturally, such a propeller can only be arrived at after experiment to support any theory used in making an initial choice.

The main geometric properties of a propeller are diameter and pitch (other features are blade area, blade shape and blade section).

Pitch is the distance the propeller would advance in one revolution. However this definition can lead us to trouble because it is not quite specific enough. It does not cover the following two extreme cases:

(a) Model stationary with engine running. Here the advance is zero, even though the propeller still has a certain pitch.

(b) The model is gliding with engine stopped. Here the advance of the propeller per revolution is infinite (it is theoretically correct!).

For the above two reasons Geometric Pitch is used.

Geometric Pitch = 2Pi r tan O.

i.e. Geometric Pitch (inches) = 2 x 3.1416 x radius of prop at any section (inches) x tangent of the angle of the blade at that section.

When pitch varies from section to section, Geometric Mean Pitch is used for classification and is taken at 70% of blade radius. This is standard practice.

Our propellers work in a fluid medium. Because of this, "slip" results. Thus the actual advance of the propeller is less than that suggested by the geometric pitch. Slip is a maximum (100%) when the aircraft is stationary. On an exceptionally good propeller, slip can be as low as 10-12%; on an average or bad one, a lot higher. (Of course good and bad are hard to define). Under ordinary working conditions it is usual to take —

Actual efficiency = 85% of ideal efficiency.

i.e. there is 15% slip (standard).

Efficiency of airscrew = useful work done in propelling the aircraft over work supplied by the engine.

Aerodynamic considerations indicate advantages of using large diameter and high pitch propellers.

Looking again at the formula

Geometric Pitch = 2Pi r tan O.

we that as the radius increases, so will geometric pitch unless the only other variable, tan O is decreased. Hence the characteristic appearance of most propellers where the blade is twisted from root to tip. If this were not done, different sections of the propeller would try to advance at different rates and this would increase slip which we want to keep to a minimum.

Another thing to keep in mind is that at the hub, the rotational speed (don't confuse with angular speed which is constant) may be very close to zero while at the tip, this speed may be as high as 400 m.p.h. For example, on a 7 inch diameter propeller turning at 18,000 r.p.m. (typical for a good racing .29) tip speed is about 375 m.p.h. (check for yourself).

We now come to the four types of airflow over a propeller:

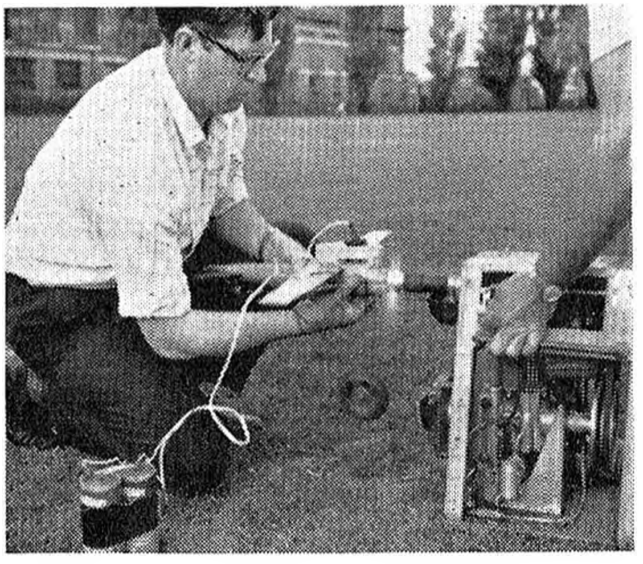
(a) Inflow — the flow immediately in front of the airscrew.

(b) Outflow — the flow immediately behind the airscrew.

(c) Wake Flow — the flow in the slipstream far behind the airscrew; and finally,

(d) Interference Flow — this can get quite involved so we won't go into it except to say that it has a lot to do with what is behind the propeller. e.g. the fuselage, etc. (Don't say that you will solve this problem by flying pushers!).

These types of flow can be greatly affected by the shape, section, and surface conditions of the propeller. It is also assumed that the propeller is rigid which is far from the truth as most of the propellers we use are somewhat flexible, which, if not taken to extremes is a good thing, as a very rigid (or a very heavy) propeller might distinegrate under high rotational speeds.



Laurie Cantwell, starting Stu. Cobcroft's Rossi 60 powered model at the Victorian Speed Championships.

Blade shape varies considerably between different propellers and is largely a matter of what job has to be done. Near the hub the rotational speed is very low and the propeller is not doing much work—hence keep the blade area in this vicinity as low as possible consistent with sufficient strength. Towards the tip we get all sorts of flow chaos so keep the tip section thin. The blade area towards the tip will determine R.P.M. to some extent so reduce the tip area slightly. We prefer an elliptical tip blade. The blade section is always a modified Clark Y section. The trailing edge is made very sharp while the leading edge has a very small radius. Every effort is made to obtain a consistent and accurate section. After modification the whole propeller is sanded smooth and several coats of dope and sanding sealer are applied, sanding smooth between coats. When the desired surface is obtained and the propeller is properly balanced (this is very important) a coat or two of some finish is applied. On drying, this surface is cut and polished.

Unless you want to carve your own propellers from scratch, you will depend on commercial brands which can be suitably modified. Most brands are good but it is very rare that one can pick up a propeller of a particular stated pitch and on measurement actually find it to be so. David Kidd and myself have measured most speed team race sizes in a variety of brands and the "American Rev-up" are easily the most accurate and this is so along the whole blade.

F.A.I. SPEED

Originally the F.A.I. permitted a relatively high wing loading, consequently the models were very small in size. In 1958 the F.A.I. changed wing loading rules and set a minimum surface area for every c.c. of engine capacity (31 sq. inch/c.c.). This rule change did not slow the models down much. Further specifications changes occurred after the 1960 World Champs.

For the 1962 World Speed Champs and subsequent F.A.I. speed events, "straight" methanol-oil fuel became compulsory.

To suit these specification changes and the fact that the .15 cub. inch size racing engines were developed to the stage of turning out up to ½ b.h.p. at between 18,000 and 22,000 R.P.M. on a reasonable diameter propeller on straight fuel, most flyers reduced geometric pitch. For instance the English Carter Specials flown by Norman Butcher and Peter Drewell go down as low as 6½in. pitch. Bob Lauderdale of U.S.A. uses 7in. pitch in F.A.I. speed. My present F.A.I. speed engines run between 19,000 and 20,000 R.P.M. static on "straight" fuel. The propeller is 5 3/16 in. diameter and 7½in. pitch.

CLASS II AND CLASS III SPEED

Main thing to watch here is not to go down too much in diameter, e.g. not less than 6 7/8in. diameter for class II and not less than about 9in. diameter for class III. Geometric Pitch for class II ranges from about 9in. to 11in. For Class III Geometric Pitch varies from about 11in. to 14in.

There is plenty of scope for experiment here as "hot" fuels are permitted (except tetranitromethane). There is also an increasing selection of excellent (but expensive!) racing engines.

CLASS I AND CLASS II PROTO SPEED

The proto speed events are not won on top speed alone. Acceleration from the standing start to top speed is very important. To help this acceleration, keep down the weight of the model, consistent with sufficient strength for a few contest seasons. Since the Proto Speed models are also much larger than the corresponding speed jobs, larger diameter propellers along with a reduction in geometric pitch are used. At the State Champs my class I job did 106 m.p.h. for the standing start mile using a 5 7/8in. x 7½in. propeller. Of course, the propeller you use will depend on your model-engine-fuel combination.

TEAM-RACE PROPELLERS

In choosing a T/R propeller, the first major consideration is whether to use wood or nylon. It is generally conceded that a good wooden propeller wil give a better performance than any nylon currently available, but of course there is a greater risk of breakage. This does not mean that a wooden propeller is a must.

In fact, some records have been set with nylon propellers. However where ultimate performance is aimed for, the wooden variety does offer certain advantages:

(a) They are more rigid than equivalent nylon ones, thus blades can be made thinner. There is also less tendency for the blades to distort or "flex-out" under flight loads.

(b) A wooden propeller is more easily reworked, so that blade shapes and sections can be experimented with until the best combination for a particular engine-model-fuel combination is found.

If your racer won't land safely without breaking propellers, you should try to modify your design until it will. If the fuselage is fairly long and the wheels kept well forward, it should be possible to use the same propeller for many races—it has been done!

Propeller sizes are very much standardised in each class so initial selection is fairly easy. For F.A.I. class, 7 x 8 or 7 x 9 propellers are common, while for Class II 8 x 8 or 8 x 9 sizes won't be far wrong. A few more laps and m.p.h. can often be gained by varying sizes to suit the particular motor-model-fuel combination, but this is something you must experiment with yourself. Nobody else is going to do it for you!

A useful trick is to drop pitch slightly over the last inch or so toward the tip, to provide a similar effect to washed-out wing tips. Acceleration should benefit. Don't be afraid to thin down the blades (consistent with strength of course), leaving leading edges "sharp" but with a very small radius and the trailing edges as sharp as possible. However enough strength must be retained to withstand "brutal" flicking. Balancing and finishing is also extremely important.

TRADE TALK

DONALD G. de CHASTEL, well known manufacturers of fuels and dopes recently sent along a range of overseas accessories for which they are Australian agents. These include a complete range of Vulcan Glow plugs by Rossi of Italy. Very good results have been obtained from their special F.A.I. plug for straight fuel. The New Speed King alloy speed pan also by Rossi is available in 5 cc. and F.A.I. sizes, without a doubt the finest pan available anywhere, and a must for speed fliers. They also have available a range of Rossi speed props and a line of nylon props. One line that should prove popular as they have been in short supply for some time is a beautifuly made thrust race for Wakefield and all rubber models.

* * * *

ROBBE MODEL PRODUCTS of Woollahra who manufacture a wide range of ship fittings and servos for ships and cars tell us that they are the Australian representatives for Telecont the German Multi R/C units. These World Champion units as used by Fritz Bosch are available in 3, 5 and 9 Channel. Theses are rockstable and you just plug in. There is no wiring to be completed. A self addressed envelope will bring you all the details.

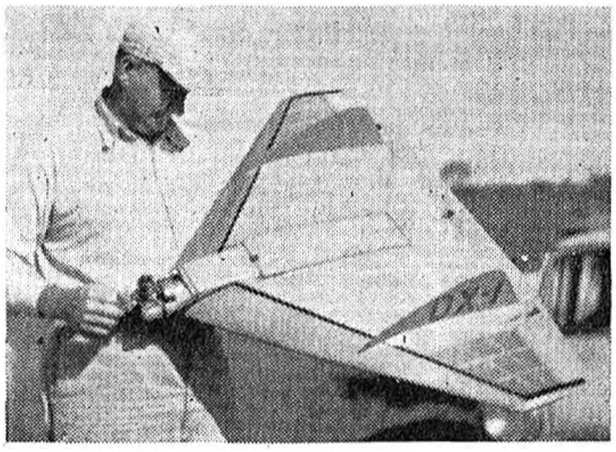
* * * *

O.S. MOTORS did very well for themselves in the recent U.S. Radio Control Championships.

John Schroeder used an I.S. Max .19 R/C to win the intermediate class and Joe Kirkland used an O.S. Max .49 R/C in his Beachcomber to win the Multi event.

* * * *

TOYS AND HOBBIES DISTRIBUTORS are the Australian distributors for Mid-West kits and now have the complete range available for model shops all over Australia. Already we have seen the Bebe Jodel as a kit and completed. As a kit it is very complete. The balsa and die cutting is above average. All metal parts are preformed. The plans are simple and extremely easy to follow. In fact, the average modeller should find it easy to turn out a really excellent model. For anyone who wants a beautiful low wing scale model for R/C—Bebe Jodel is the model.



Ron Wilson with his Mid West Hustler Delta. Home made Multi Channel and powered with an O.S. 19 R.C. motor.

The Editor will publish in TRADE TALK details of new products, services, accessories and any information concerning the Model Trade. The necessary information for inclusion in the next issue should reach Model News as soon as possible after the appearance of this edition.

* * * *

However, the kit that is creating the interest is the Mid-West Hustler Delta. This is Mid-West's latest release and already holds the world's R/C speed record.

* * * *

RON WILSON'S test on the R.E.P. Musclemite servo: "I found that the Musclemite has a very strong case and very strong output shaft. It is half inch shorter than the Duramite and the output arm is adjustable through 360 degrees, which helps out when it is to be fitted in an awkward position. The battery drain is very low and with normal control surface loading it draws only 200 MA. At £7/17/6 retail it is one of the best servos available on the market at the moment."

* * * *

MACQUARIE MODEL SUPPLIES, the Australian agents for D/C Motors, advise that they have full stocks of all motors, accessories and spares. Their principals in England have recently made arrangements with K.L.G. to make for them a batch of the old type K.L.G. Glow plug. Some of these could find their way into the stocks of Macquarie Model Supplies. Until they went out of production some years back, these brass ball top plugs were one of the most popular on the market.

* * * *

THE NORTH COAST HOBBY CENTRE recently received another shipment of the famous and very successful TAURUS Multi Radio Control Kit. This is certainly a lot of kit, and needs no introduction to the type of Modeller who would be buying in this range.

This shipment consisted of only six kits, so if you are thinking TAURUS contact the North Coast Hobby Centre. They also have a complete range of all the R/C accessories and hardware that simplify the building of multi models. Also received another shipment of F. & M. Radio control equipment. Single, ten and 12 channel gear. De Bolt 12" canopies are also available at present.

* * * *

O.S. DISTRIBUTORS are very happy with the results recorded with their R/C motors at the American Nationals. The R/C 19 won the single channel and R/C .45 was used by Joe Kirkland to win the multi event.

Radio Notes

O.S. "PIXIE" TRANSMITTER AND RECEIVER ON TEST

One of the bright spots for aeromodelling in Australia during 1963 was the rapid growth of Radio Control. Many control line enthusiasts unable to fly their high powered models locally, switched to radio. Some have even claimed that their C/L practice has been a considerable help.

For those taking up Single Channel flying in 1964, the O.S. company have just released a Transmitter and Receiver (package deal) which will undoubtedly open the way to hundreds of newcomers. Called the "Pixie" it will sell for the very low price of £22/10/- complete. We have just concluded testing the first samples to arrive in this country and are pleased to pass on what turned out to be outstanding results.

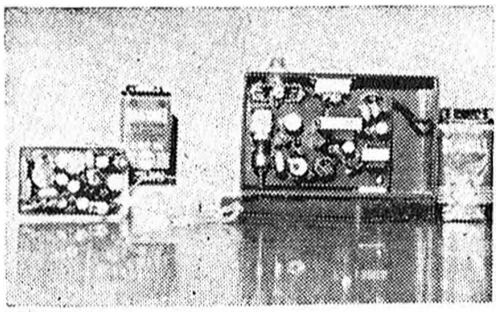
DESCRIPTION:

Receiver: All transistor relay type weighting 1½ ounces, and measuring 2 1/8in. by 1¼in. by 1in. Components are mounted on a 2in. by 1in. printed circuit board which is enclosed in an unbreakable nylon case. Part of this printed board projects through the rear of the case leaving six tags exposed for battery and relay connections. The relay is suppressed for spark interference and the receiver compensated for heat variations up to 145 degrees F. Operation is from a 9 volt hearing aid battery, with a current drain of 4 M/A off and 25 M/A on signal. The relay pulled in at 15 M/A and is not prone to vibration. In fact you could cement the receiver to the fuselage side if you so desired.

Transmitter: This is an all transistor 27-120 M.C. crystal controlled hand held unit. It measures 3¼in. by 2¼in. by 1¼in. Weight complete with battery and aerial only 7 ounces. It features a 3 place centre loaded aerial which screws together before extension. A 9-volt hearing aid battery fits neatly into place using clip connections provided. The front of the transmitter comes off to reveal the battery compartment and the internal components mounted on a printed circuit.

A tuning slug allows power output adjustment if necessary. However these are crystal controlled transmitters and are factory tuned and our sample required no further adjustment of any kind.

The on/off switch is nicely placed on the side of the case and the transmitter fits snugly into one hand with the aerial extended. Signalling is done with red push button also on the side of the case.



The new O.S. Pixie Transmitter and Receiver.

Operation: After clipping a 9-volt battery into the transmitter and soldering the positive and negative of another 9-volt battery to the marked tags on the receiver, the outfit was switched on. An 0 to 50 M/A meter was placed in the positive receiver lead to check readings. The receiver with the transmitter off idled at 8 M/A and dropped to a solid 4 M/A when the TX was switched on. The tone signal from the TX resulted in a receiver rise of 25 M/A, which is quite considerable as only 15 M/A is required to operate the relay.

Range checks showed that the receiver had been accurately tuned at the factory and at exactly ½ mile range the signal was still rising to 25 M/A. Even more impressive than this was the fact that even at this range the receiver tuning slug could still be adjusted threequarters of a turn either way before the signal dropped off peak. At close range there was no evidence of swamping and experiments with Cobb Hobby and Mighty Midget electric escapements showed that interference had been eliminated by the careful selection of suppressors in the receiver. The signal drop from 25 M/A to 4 M/A idle at close range didn't produce any signs on the meter of shuddering as the electric escapement came back to neutral.

This sample has proved really something on tests.

SUMMING UP:

The Pixie is the smallest transmitter-receiver we have yet seen. Having tested it we can only report that the performance was outstanding and was not faulted. We liked the flexible tuning of the receiver and the fact that here at last was a unit capable of operating electric escapements without fuss. The transmitter with its short centre loaded aerial is a real powerhouse. We even went to the trouble of testing it over the crest of a hill to confirm its performance.

Here is a high quality outfit with performance and at a price to suit everyone interested in Single Channel flying.

O.S. DISTRIBUTORS throughout Australia have supplies arriving February and at the price of £22/10/- we can't see the initial stocks lasting very long.

SILVERTONE.—Have been putting their new transistor output RX through its final flight trials and report that they have been most successful. Temperature stability and range is every bit as good as their current RX. The production model will most probably feature a single ended output with provision for adding quick blip and third position switcher circuits. This allows the basic RX to be sold at a much cheaper price while adding to the versatility of the set.

The size will be reduced by one third and the weight correspondingly.

Using the massive power transistors, outputs of up to 10-20 amps. can be obtained from this set up, if necessary. These will be built on a custom built basis for anyone who requires such high output currents.

The current relay RX will still continue in production as the versatility of the relay is still hard to beat. The object to transistor output stages is the limitations on current imposed by the dissipation rating of the transistors.

It is quite possible to operate a Mighty Midget Servo using A.C. 128 transistors. We have been testing our RX on a Prossercomp using 3 DEAC cells (3.75 V).

We are still using a valve detector. As far as we are concerned transistor detectors are not suitable for Australian conditions. This applies only to regenerate detectors. Superphets are different.

International 1,000 Lap Team Race, 1963

ENGLAND

(Condensed from a report by J. Humphrey, Wharfedale P.R.O.)

The English section of the current International 1,000 lap team race was held at Rufforth Aerodrome a few weeks after the Australian race, organised again this year by the Wharfedale M.A.C. The weather was cold and overcast for most of the day, but there was no rain and very little wind, and as expected very good times were put up in both the heats and a hard fought final. Actually both first and second placegetters bettered Australia's winning time by several minutes.

Two rounds of 200 lap heats were flown. In the first heat the Horton-Humphrey team flew their 122 m.p.h. Dalesman III to a time of 10:36, slowed by two extra stops when dirt found its way into the fuel line. The Place-Howarth team returned a very good 10:36.2 in the second heat with a 100 m.p.h., 120 lap model powered by a Howarth special motor of 2.6 cc., which is really a highly modified ETA.15. Laurie of Novocastria was in line for a place in the final with 11.12.8, but later pranged his machine. In round 2 Wharfedale's Adam-Lee team qualified for the final with a 10-year-old Thunderbird proxy flown by Lee, Secker and Hilyard, whilst the Hampson-Yates team rocketed around the 70 laps per tank to set fastest time, with 10 minutes dead. Last year's winner, Bullock of Halifax, had no luck with his old 2-wheeled Dalesman and couldn't return a time.

And so to what promised to be a very fast final, with Horton rather worried whether his ETA .29 powered Dalesman would last 1,000 laps at 120 m.p.h., as it was suffering the after affects of a very bad fire. He decided he had better try to lose a bit of speed, and after attaching heavyweight Laystrate it dropped to an acceptable 113 m.p.h.! Place and Hampson both had range at respectable speeds, and Lee was just hoping his model would stay in one piece.

All got away to a good start except Horton, who was down within one lap due to a tap not being closed on the tank. A quick restart and he was in the running again. Two hundred and fifty laps saw Horton 30 laps behind leader, Place, after having suffered two fires in one pitstop. At 500 laps he was excitedly signalling his pilot that they were now only 10 laps behind Place. When 700 laps was reached Horton was a couple of laps in the lead, but it was still anybody's race, with Place keeping up a consistent 100 m.p.h. for 120 laps. Hampson was in trouble again with a broken tank valve, which caused his lappage to drop to around the 25-30 mark.

Horton's faster model continued to forge ahead however, and by the time he had completed the 1,000 laps he was 40 laps in front of Dick Place, to receive a well earned cheer from spectators. For most of the race he was lapping the other three modes once in every five laps, resulting in a time of 55 mins. 41.2 secs. Not a single plugs was blown, or prop broken during the whole race.

Results:

(1) J. Horton, J. Humphrey, M. Bellamy.
Time: 55 min. 41.2 sec. with 32 pitstops.
Heat Time: 10 min. 36 sec.
Model: Malesman III.
Motor: ETA .29.

(2) D. Place, D. Howarth.
Time 58 min. 30 secs. with 13 pitstops.
Heat Time: 10 min. 36.2 sec.

(3) Yates, Hampson.
Time: 70 min. 42.2 sec. with 23 pitstops.
Heat Time: 10 min. 0 sec.

(4) Lee, Secker, Hilyard.
Time 76 min. 38 secs. with 40 pitstops.
Heat time: 11 min. 49 sec.

* * * *

NEW ZEALAND

This race which was organised by the Wharfedale M.A.C. (U.K.), started at about 2.45 p.m. after a delay in waiting for Tony Cook. There were only three entries but all were well prepared The weather was calm and very hot (80 deg.) All pit crews were called into the centre and the countdown was started. At the drop of the flag, all teams raced to their models. The start was rather slow with the Stott-Long team the first away followed a lap later by Cook-Stevens then Long-Lowry. Peter Stott's model seemed to be away to a very good start with his O.S. 29X travelling at around 95 for 38 laps although pit man Vern Long was having a little trouble tuning.

The Cook-Stevens entry was well on the way travelling consistently at 85 m.p.h. for nearly 50 laps. These two were well on the way whilst Bill Long was having fuel feed problems. At around 250 laps, Vern Long changed the first of three blown plugs. Cook-Stevens took the lead at the 250 lap stage and held it for the rest of the race but they were not without their troubles as they had one plug change and the electrical system failed at an early stage. Long-Lowry had little else but trouble which seemed to be with fuel. They changed their fuel at the 500-lap stage but this made very little difference. They also had one plug changed. Their entry was the only mono-wheel model.

The most interesting points of this race were that all used straight fuel, K.L.G. long reach plugs and 8x8 Tornado nylon propellers. Cook-Stevens' model: Own design, 147 sq. in. wing, speed 85 m.p.h. —50 laps. Twenty-one pit stops in the 1,000 laps.

Classified Advertisements

FOR SALE, 8 Channel Grundig Transmitter, Receiver, 1 and 2 filter unit, switch and antenna, 1 Bonner Duramite Battery Box for received and batteries. Urgent sale. As new, only 3 weeks old. Sacrifice for £70. Original cost £95. G. RYAN, 184 Doncaster Road, North Balwyn, Victoria. 'Phone 85 4414.

FOR SALE : O.S. 29 Max III, good condition, £4/10/-. Frog .349 B.B., almost new, £5. B. ACHESON, 31 Palmer Street, Rockhampton.

BRAND NEW, Unrun McCoy 60. Unwanted. Gift offers. 7 Bell Street, Bundaberg.

BRAND NEW Unused Gear : Bonner Transmites, £11/8/-; Duramites, £5/8/-; Veco 45/RC, £13/9/-; Veco 3½" Air Wheels, £2/11/- pr.; Rep 10 Relay Rx, £28/5/-; Cox TD 10, £3/5/-; set 10 Rep Relays, £12/10/-; O.S. Varicomps, £2/5/-; Taurus Kit, £11. S.A.E. to R. JONES, 70 Ferro Street, Lithgow, N.S.W.

FACTORY MODIFIED Oliver Tiger, current model, with Team Racing pan, £10 or near offer. EVAN JAMES, 21 Utalong St., Deagon, Qld.

FOR SALE : Wright RX and Relator. Just been reconditioned, £5. Taipan, 2.5 cc., £2/10/-. 2.3, as as values, as new, 3/- each. Ronald Caves, Ballarat, Victoria.

HURRICANE Tech. Manual, 16 pages. Photos, data, plans. Price 7/6, plus postage 5d. Macquarie Model Supplies, 3 Grandview Drive, Campbelltown, N.S.W.

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Behind the Iron Curtain

Poland is perhaps the best country for modellers living in the east block. Poland has a healthy export trade and is thus able to import other goods than necessities from the outside world. The people enjoy a high living standard in spite of low wages. Foreign magazines are freely available.

Modelling in all fields is of a high standard, particularly control line scale. At the last C/L scale contest the first place was taken by a four engined "Brittania", and the other places were taken by a "Lancaster", a "Wicherer" (pre-war twin engined transport) and a "Mustang".

Co-operative clubs are a great aid to modelling and its younger followers. Usually modellers start out with A2 models of cheap construction and through books and instructors are quickly able to move up into competitive flying. Technical books are well written and illustrated, no advertising or politics loading the pages. Usually these books are supplied by free libraries.

There are no plastic scale kits produced in Poland. Model and aviation magazines feature coloured pages as well as attractive covers, but paper is of poor quality. Plans and information on foreign models and motors are regular features. Radio Control has a small following, with gliders and a few power models. Lack of suitable fields is a handicap. Most radio modellers are more inclined to radio than to flying. Home designed tuned reed sets being well to the fore—usually only two or three reeds.

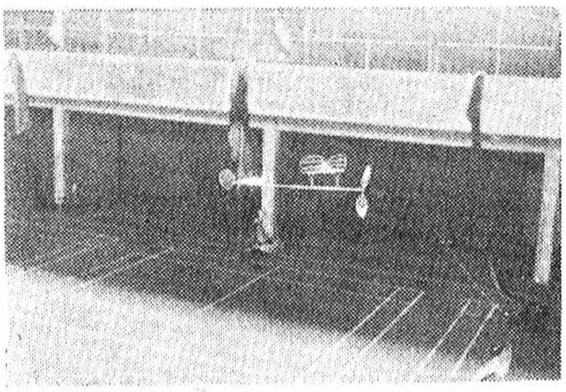
U.S.S.R. : Here the sport is highly organised and rules are strictly F.A.I. At contests and even at general flying meetings, there are many amenities not found in the West. Models on free flight are followed by telescopic range finders and an accurate record is kept of the altitude, range and duration of flights.

Modelling also is well publicised, modellers carrying an array of machines can be found in every parade which marches through town. Publicity photographs find their way into every type of youth or hobby magazine. Unfortunately not all the writers or "designers" are up to scratch and some poor material is mixed with the gems. A very handy tool at free flight contests is the walkie talkie Model chasers are able to swap news of a model's progress as they attempt to follow it and losses are kept low.

Radio models are large with small motors. Transmitters and receivers are usually all valve and are only recently adapting to tone. usually home-made reed banks with magnetically pulled controls instead of escapements or servos. Control line stunt is popular and some very fine models are flown. The average modeller uses small motors, perhaps the most built model would be the "Yak 12", which lends itself well to F/F and R/C.

Books on modelling are good. Information covers tricks with tools and materials not usually associated with model planes. Sections on motors still include spark ignition types and how to wire them. The Soviet modeller has the opportunity to pick up a far wider view of his hobby than his western counterpart. Model magazines as such are non-existant, but model sections are included in magazines on aero sports, parachuting, etc. The "Moscow Aeromodellers' Club" features good articles in aviation magazines, including complete R/C models made from raw materials and a few valves, condensers and resistors. Possibly they only do it at home models to be found in any mazagine which can be completed by the initiated. also many advanced technical topics of good value are distributed from this club. A peculariity of radio controlled models in the U.S.S.R. is that they are usually flown on airfields—a practice frowned upon in the west. Another unusual feature is to see a D/T fuse and pop-up tail on R/C models, apparently fly-aways are frequent although this is not mentioned.

INDOOR CHAMPIONSHIPS BLEDISLOW HALL, HAMILTON, N.Z.



John Malkins record breaking indoor model in action. Indoor flying is making a strong comeback right round the world.

John Malkin and Brian Roots came all the way from Wellington to attend this meeting, and John would have been one of the happiest men in New Zealand on the 400-mile trip home again. For two years he has been trying to break Vern Gray's 25 year old record of 13 minutes, and today he did it. Jack Ericson, of Auckland, also managed to break the magic time, and Jack would be the second happiest. We travelled down with local model shop owner Angus McDonald, and on arriving at the hall the first thing that we heard was some cool music. Found out it was a Twist Marathon going on in the other part of the hall and so we were entertained all day.

Most of the modellers, as the day progressed, improved there times in the hall, which was about 80 ft. wide bv 250 ft. long and a ceiling of 50 feet, sloping down to 40 at the walls, with about a 12 foot wide balcony all around. There were seven entries in Microfilm and four in Tissue, with a couple of experimental models also.

Jack Ericson flew a very nicely built Tailess model to record 5.22.0. and John Malkin whipped out his Helicopter to manage about three minutes. John also flew a little R.O.G. model and recorded in the over 18 inch class the following times, 7.10.4 and 7.42.0.

Microfilm results were : J. Malkin, Wellington, 14.38.0. 12 11.4; J. Fricson, Auckland, 13.34.5, 11.54.2; A. McDonald, Auckland, 10.37.5, 10.24.4; B. Keegan Auckland, 10.4.0, 10.5.2; T. Martin, Roskill, 9.18.0, 7.42.8; A. Graves, Hamilton, 6.53.4, 3.45.5; G. Bowden, Roskill, 5.22.0, 5.9.8; S. Rogerson, Hamilton, 5.11.5, 4.25.8.

Tissue results : B. Keegan, Auckland, 6.23.0, 5.54.0; J. Ericson, Auckland. 5.54.8, 4.30.5; A. McDonald. Auckland, 4.47.2, 4.25.2; A. Graves, Hamilton, 3.40.0, 3.36.8.

CLUB NOTES

Notes to be included in this section of the next issue should reach the Editor as soon as possible after the appearance of this issue.

NEWCASTLE MODEL AERO CLUB

Don't know how it is with other clubs, but here in Newcastle we're really in the doldrums. With two control line fields available, good ground, short grass, no interference, you'd think you'd be crushed in the rush for circles; but not so.

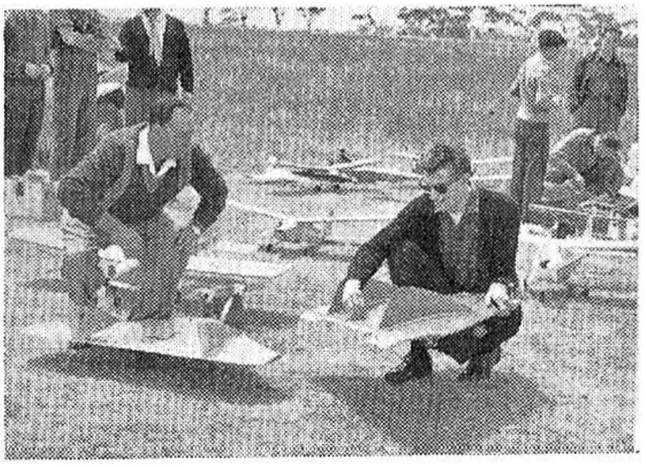
Saturday flying at the school is dead, and we're just waiting for the funeral notice to appear in the local Press. Sunday flying is a little better, but take out three or four regulars and you could bury that too. Seems to me that we as modellers sit around feeling sorry for ourselves when we have nowhere to fly, and when we do get a field we just sit aronud Or is it simply that we are getting too lazy, and want it too easy? Was a time when you waited months to buy a motor, made your own tanks, bellcranks, horns, undercarriages, leading edges, trailing edges, carved your own props. And when you finished you had to queue up to get a flight. May be there just isn't enough of a challenge these days.

Having got that lot off my chest, I'll now try to be more cheerful. And the most important thing at the moment is, of course, our annual contest. It's to be held on Sunday, February 2, 1964, at District Park, Broadmeadow.

Events are: Half a team speed; F.A.I. team speed; Class B team speed; stunt (with prize for the best junior); combat; F.A.I. class speed; B class speed; Class I proto; Class II proto.

A pretty full programme, I think you must agree, and we hope to see a lot of modellers there. Read and heard lots about the red hot speed and proto boys of Victoria. What about seeing you down here?

Speed and proto events have a catch to them; (so alright, how many clubs will have speed or proto contests, catch or no catch?). The catch is this: Speed will be on, prizes will be provided. If support in the shape of entries is forthcoming — proto is on, because I moaned, groaned, ranted and raved about it. Being a recognised contest, naturally any records established will be recognised; however, because it's a new event (at least to Newcastle) and because we have a pretty full programme even without proto, the club feels that it will not be able to provide prizes.



Hustler Deltas are fast becoming the thing in R/C for Pylon Racing. The two shown here were built by Victorian modellers, Keith Follet (left) and Anthony Walsham. Keith's is powered by an O.S. 19 and uses O.S. 10 channel gear, and Anthony uses an O.S. 35 and Grundig 8 channel.

If you don't approve, then kick me. I suggested it because I felt that it was at least one way of getting proto events into the contest calendar, and I reckon a proto contest without prizes is a heap better than no proto contest. Agree?

Of course this contest should have been written up in the last issue of Model News; and if you look back to the last issue you will find that I did in fact mention it. However the mention was a vague one, except that I spoke of Australia Day—and you might be aware that February 2 is not Australia Day. Why the vagueness and apparent indecision? Well, gather round, kiddies, and I'll tell you.

Round about August we wrote to N.S.W.A.A. and asked for this date. No answer. September we wrote again. Likewise. Tentatively we went ahead organising, and wrote again. This time we did get an answer, but simply to tell us that the day had already been allocated. (No, Ivor, this is not an attack on you or the work you do. I think you should know me well enough by now to realise that if I wanted to have a shot at you I wouldn't try to wrap it up; I also am only too well aware that you would only be too happy if somebody else would step in and do some work for a change, instead of moaning about what you do or don't do).

However, I am trying to explain why we can't give as much notice as we would like—and incidently I would like to point out that while we were being mucked about we lost several prizes because we couldnt tell the donors when we wanted them. So we're not just complaining for the sake of it.

I do feel however, that if dates are going to be allocated there should be two things borne in mind by the State body:

(1) Have a closing date for requests for allocations each year, and examine these requests on their individual merits.

(2) Have a contest calendar out to the clubs as soon as posible after the allocations are made, so that clubs who missed out can do something about their contests quickly.

And this brings me to my final point (who said I had vinegar for my tea tonight?). Throughout the year there are five long weekends. Two of them, Christmas-New Year and Easter are reserved for the Nats. and State Championships. Fair enough. That leaves three. If a club can renew its application each year on the grounds that they had it last year it means that no one else can get a look in—and you might get the anomalous situation where a small, or nearly defunct club can use such a date for an unpopular contest, while big, popular contest programmes are crowded into one day instead of a possible two.

That is why I say we should have a review each year of the applications. Having got all that off my chest I hope that I'll be able to sleep a trifle easier tonight. Looking forward to seeing great numbers of you in Newcastle on February 2. If the weather doesn't do something frightful to us in the meantime we should present you with four well grassed, closely mowed (and I mean close) circles.

—RON NEVILLE

M.A.R.C.S. NEWSLETTER

(By Gerry Enery, P.R.O.)

Activities of our society in recent months has brought an increase in flying mainly due to more advanced radio equipment becoming readily available, plus members furiously modelling to a very high standard the more recent designs of single and multi channel models and including quite a few Deltas.

These models are being built and flown owing to our acceptance of Pylon racing at which our first taste of this event proved that it is truly a spectacular and exciting contest.

On this particular day Barry Angus won with a time of 1.40, not bad all considering, but I'm quite sure that time will be greatly lowered in the very near future.

The same day saw the maiden flight of Jack Bone's twin K. & B. 45 powered scaled up Hustler Delta, members and visitors alike gathered round in awe as the twin engines burst into life, watched breathless as it streamed down the strip and gently lifted off in a perfect take-off. The resultant flight and perfect landing brought a tremendous burst of applause from the crowd.

Many of the M.A.R.C.S. members can be seen most weekends striving to increase their potential as good pilots to make each competition day much harder on those very much abused creatures (the judges). Still it all adds up to great fun and also have noticed that most single fliers now fly in winds that would have been considered impossible two years ago.

Noel Fell's first 35 powered Delta screaming around estimated level flight speed of 90 to 100 m.p.h. brings smiles of satisfaction to his face and number one son justs stands and grins even more broadly (if that is possible).

Noel's first test flight completed with a landing of about 65 m.p.h. Perfect landing only the tyres forgot to keep up with the aircraft; very nice hubs only touchdown.

Overheard Tony Walsham asking Noel how to keep tyres on at that speed as Tony has similar Delta (not flown to date). But he (Tony) has consistently flown week after week and now shows what practise can do. Tony would be among the most consistent flyers on the field (with the help of his Man Friday father Jack).

Lins Blackie stooging his marcsman on four channels building up flying time.

Bob Payne and his recently acquired Smog Hog sneaking into the flight line more frequently of late.

Geoff Glass? John Lamont? Tony Farnan? Stormers galore with wonderful results as all are very experienced multi flyers. John St. Clair thrilled to the back teeth with new radio gear and flying to prove it.

And of course yours truly has had seven flights with my Merco 49 powered Taurus, beautiful groovy airplane but not experienced enough yet to do full pattern flying. So reverting to rudder and elevator to gain more confidence with the multi channel equipment.

Geoff Tuck a regular visitor to the flying field but to date no new model yet. I feel that Geoff should be gently reminded that the mourning period for old Bertha is over now.

Our genial president, Ian Watts and family always a welcome sight and occasionally we are honoured with the presence of secretary George Mallett flying his veteran Marcsman or his chirpy little Luton Minor.

Although the Christmas period is hectic for Ken Bowden I am quite sure he'll be up flying with the rest of us as soon as Father Christmas has gone by-by. Then we have Keith Follett, Bill Lynch, Peter K., Bill Abbott, Perc., Ray and son, Les Caulfield, Mal Caesar and others all doing their share of air hogging which all in all shows that the M.A.R.C.S. now has 45 members and we are pleased to report that we will now accept country members. For all details contact Secretary, George Mallett, at 5 Princes Walk, Melbourne.

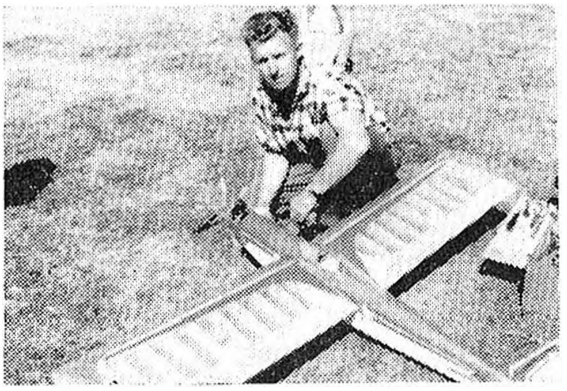
It is hoped during 1964 for the M.A.R.C.S. to visit some country centres. Club secretaries should contact me at 1 Victoria Road, Malvern. If you would like to arrange a flying day, plenty of notice must be given.

On the Nationals side we have approximately nine members who will attend this year. All radio events will be entered.

Re next Wagga meeting it is hoped that the annual M.A.R.C.S. v. R.C.M.C. contest will include a Pylon event which is being arranged by Basil Nealy.. Some of our members are experimenting with very fast Deltas and we hope to give "Bas." and his boys a real fright.

On the scale side for Wagga we have George Mallett and Anthony Walsham starting on their large scale Luton Minors with two cylinder motors, Barry Angus has a multi channel Mustang ready and other models include a Piper Tri Pacer and a Tiger Moth.

It has been very noticeable that of all the M.A.R.C.S. members only three or four are still using single channel radio, all others are using two channel or multi. Standard of equipment has improved 100 per cent. due mainly to the multi channel Servos now in use.



Gee String, a very popular R/C design. This one by Bob Milne, of Hastings, N.Z., uses Kraft 10 channel and powered by K. & B. 45.

The take-off strip is kept in good condition at Boundary Road due to the recent purchase of a motor mower of very doubtful repute. Does a real good job although it has to have a major overhaul after each session.

Looking forward to our children's Christmas party, as our annual dinner was a huge success. Sixty-one members and guests had a whacking good time.

Most humorous event of late was when yours truly was wandering about the sky with his Marcsman when suddenly no response to signals. Much button pushing, no results. Glance at transmitter and notice no aerial. Noel Fell had sneaked up behind me and knocked it off. Chased him around take-off area while Marcsman lazily waited up in sky till I retrieved it. Much laughter from the throng of members.

Till a later date . . . Happy Flying Fellas.

TAMWORTH MODEL AIRCRAFT CLUB

The R/C "Fly In" mentioned in the last issue got under way as scheduled on Saturday afternoon, 28th September. From early on Saturday morning, flyers from all over began to converge on Don Farrell's Hobby Shop and after the shop closed it was decided to commence the tuning and testing session shortly after lunch.

By 2 o'clock the fun was on in earnest, and but for one fly away, due to a sticking escapement, everything went well. Flying continued till late, with everyone present getting their share of air time and after dark a darbecue was held at Bill Burke's home. This informal get together continued till the late hours and was enhanced by the arrival of Russ Hammond, of Coffs Harbour, with a good selection of R/C movies, which were received with much enthusiasm.

Competition flying eventually got under way after a much delayed start on Sunday morning (apologies to all), and everyone, particularly the onlookers, seemed to enjoy themselves.

Results of the Single Channel events were as follows :

Most consecutive spirals. John Smith, of Grafton, "Square Hare", Eyna .09, Silvertone Rx., Varicomp.

Spot landing : John Smith, of Grafton.

Three lap time trial : Norm. Moody, of Coonamble, "Cicada", O.S. 19. Silvertone Rx., O.S. Kl.

Best prang during contest : Bill Thompson, of Port Macquarie, "Cicada" O.S. 15, O/D gear, modified O.S. Kl.

John Riley's Aeroflyte Stunter O.S. 19 and Top Flyte 9 by 5 for power. Weight 32 ozs. Fitted with O.S. silencer. Flies well.

The winner of each event was presented with a suitably engraved pewter mug.

As there were only two multi ships ready to fly, the multi events were dispensed with, and both pilots put on a display for the enthusiastic crowd of spectators.

Russ Hammond flew Jim Palmer's "Sultan", equipped with Silvertone 10 (40 M/c) Johnson 36 and Bonner Transmites.

Bill Burke flew his Astro Hog with F. & M. Midas Superhet (27.045 M/c) Veco 35 and Bonner Transmites. As both these models were on different frequencies, it was the first time that two multi models were able to take the air together in Tamworth.

Some highlights of the show were :

Brian Eather's disastrous spiral on to the cross bar of a set of goal posts.

Don Farrell's flying of a Junior Falcon (F. & M. "Saturn", Fox .049 O.S. K2), built by Brian Potter. This model on its initial flight was flown almost out of sight (upwards) and much to the delight of the crowd was eventually landed at the pilot's feet.

Morris Oxford's impressive Astro Hog Junior (O.S. 5A, O.S. Pet, Quadtrol Escapement). Unfortunately this model had the misfortune of having a bicycle fall on it after its first flight and was not flown again, even though hastily rebuilt.

Morrie Dick's beautifully built "Taurus" (F. & M. Midas Superhet, O.S. 49 Bonner Transmites). Unfortunately the motor cut during take off on its maiden flight, slightly damaging the model, so we never got the chance to see this beauty in the air.

The fine showing by Russ Hammond (Multi) and John Smith (S/c), and the equally impressive flying of two promising juniors, John Thompson, of Port Macquarie, and Dennis Scott, of Tamworth. Dennis had the distinction of dicing with a motherly type eagle for over ten minutes until it finally flew away in fear or disgust—we don't know which.

Our thanks are extended to all who attended our first effort at a strictly informal R/C meet, and we hope you all enjoyed yourselves. Your enthusiasm is shown by the distances travelled. Without mentioning a long list of names, let it suffice to say that we had representatives from as far afield as Lismore, Grafton, Coffs Harbour, Port Macquarie, Warialda, Barraba, Coonamble, Boolaroo and Tamworth.

The success of the meet was due in no small way to the weather, which was perfect, and the fact that there was not one model taken to the field that was not flown at one time or another over the weekend.

There were no "experts" to scare off the uninitiated, so everyone had a ball. See you all again next time we hope !

BILL BURKE.

NORTHERN DISTRICTS CONTROL LINE CHAMPIONSHIPS — BENDIGO

Four event were on the programme, F.A.I. and Class 2 teams race, combat and stunt.

F.A.I. T/R was first. This had four entries, but only two qualified. First home was Birkin-Friar, of Windsor M.A.C., with a time of 6.23 minutes. Second was Stawicki, of Geelong, M.A.C.

Class 2 was a little hectic, as the grass was pulling some into the circle. Cincotta was first with a time of 7.52 minutes from the Elstinwick-Caulfield M.A.C. Second was Heaps, of Echuca

M.A.C., and the third was Lidy-Hobba team from Oakleigh M.A.C.

Combat: This event proved how soft balsa really is and how easy models shatter when they collide in midair. Collisions seemed to be the order of the day and more than half the models flown ended this way. Toward the end of the afternoon I saw five good healthy funeral pyres at one end of the oval. One chap claimed that his combat wing with O.S. 35 pressurised, was doing 108.8 m.p.h. Another bod showed us what "in the groove" flying really was with a combat wing minus the elevator and all of the trailing edge plus about half the cord of the wing. Funny thing that, just kept going round and round steady as a rock. The winner was Hughes, from Elstinwick-Caulfield M.A.C.

Stunt. The models were fabulous to say the least. First was ken Taylor, from Stuntmasters M.A.C., Melbourne, with 1,028½ points. Second was Neil Vains, of Bendigo M.A.C., with 935 points. Third was Peter Brown, of Bendigo, with 811 points.

On the whole it was quite a good day's fun. Expensive for some of the guys, but they enjoyed it, and that's all that matters. The team racers had rather a trying time, trying to get laps and extra speed owing to the very humid weather conditions. One point in question was the combat. I do believe that those who took part could do with another 20 or so hours practice. It was lousy. Apart from a few spectacular collisions, the combat was like a team race with streamers added. How about it, chaps? Spruce it up a bit next time.

JOHN POWER.

F.A.S.T. CLUB'S FIELD DAY

Club roll up was good for a change after a pretty bad set of weather conditions that seemed to invade most available Sundays.

A lot of interest centred around the newly imported Torp 29 R's. Three of these motors so far have reached speed merchants' hands in N.S.W. and one in Adelaide.

At the start my motor in an F.A.I. area, 29 speed model showed up by being unable to settle and fly, cutting just on takeoff.

At this juncture Stu Colcroft showed monoline flying really is easy with a run of the Ross'e 60 at 141 m.p.h., followed by a screaming run with the model G20 super Tigre at 121 m.p.h. in the regulation F.A.I. model. Both these runs were on 4.1 fuel (not 4 nitro and I oil as someone was using).

Laurie Cantwell then dusted off his old model 29R Torp at 131 m.p.h. About this stage my Torp 29R began to respond to 12 per cent. nitro and managed a flight at 137.5—one step back the sceptics. As the motor received more running the speed rose to 141.5 on 25 per cent. nitro, all flights incidentally were on the new 7 x 10 strato prop.

The prove mastery, Laurie countered with a magnificent run of 145 m.p.h. To me this was a screamer for a chrome piston Torp.

Andy Kerr's 29R was then flown when he found Mac 60's can be frustrating. This motor has the piston clearance set for Adelaide's heat and was free enough to go up to a somewhat startling speed of 153 m.p.h. on 30 per cent. nitro, with the 7 x 10 strato up front. This run, though fast, did not sound like the ultimate for the motor, so a few eyebrows could be raised by those new "Brodbeck Bombshell" in the next month or so.

Last efforts were at Milperra Vale in the evening, where official record attempts were run off with Ivor Stowe officiating.

Andy Kerr's model showed enough form to make an interim record of 141 m.p.h., while a few other models showed that 129 on one prop blade might not be fast, but it certainly frays the model.

An attempt on the Proto record also showed the midair tango as the mighty torp shredded first the prop, then the model. Where can you buy ebony props?

Stu. Colcroft did not fly the little G20 model —mores the pity, as records are meant for breaking and this one has what is needed.

A word of warning showed from the days of flying. Borne out by a piece out of Stu's cheek. When these new 29R's become generally available during the next few months a few coats of a hard clear plastic would be worth while to give the tip strength needed for modern power output.

So ended one of the best day's speed flying it has been my pleasure to watch and fly in.

—JOHN MORGAN

REPORT ON A|P.M.A.A. WAKEFIELD CHAMPS. HELD AT WHENUARI

This meeting was held even though the weather was not the best and resulted in only about 12 bods turning up, and there was not very much wind at all and those who flew returned good times.

The championship class was only contested by two modellers, and the winner, Devon Sutcliffe, returned a total of 774.4 seconds, consisting of 180.0, 96.9, 180.0, 137.5 and 180.0, which was a fairly good time. Chris Sleep was second with 71.9 seconds, and was flying an XL 56B model. Chuckglider went to Steven Townely with a flight total of 163.4 and second was G. Richardson, also of the Tamaki Club, with 115.8 seconds. Third placing went to Chris Sleep with 95.0 seconds, and Chris also won Power with 86.0, with Wynn Manson, of Papatwotoes second with 51.5.

Wyn's model was brand new and he just gave up trying to trim it out of a very tight right hand power stalling climb followed by a big stall off the top. There were only two entries in A/I and Steve Townley won, using a Modified A.P.S. Aiglet and Chris Sleep was second, with a model that he no longer has due to the fact that he did not have a D.T. He hooked a beauty of a thermal and vanished into the clouds for seven minutes. Townley's time was 318.9 seconds and Sleep's 289.6 seconds.

Mick May with his entry in open rubber. Model was out of trim. Flown at P.G.F.C. Champs.

Race Times

(By David Kidd)

Knowing the speed and lappage your model can do, what race times can you expect ? The accompanying table gives an answer. It is based on a similar table originally prepared by Ken Long in England, but it assumes that 15 seconds will be lost at the initial start, and provision is made for different length pitstops, so the figures will be somewhat different. These should be regarded as times to aim for rather than ones to expect every time, as during a race little things nearly always go wrong to slow the performance down. By far the most common cause of consistently slow times is slow or unreliable pitstops. This is something that only practise, or perhaps a new motor can cure.

Estimated Race Times over ten miles (140 laps)

	20 SEC. PITSTOPS			30 SEC. PITSTOPS		
	LAPS			LAPS		
M.P.H.	35	47	70	35	47	70
80	8.45	8.25	8.05	9.15	8.45	8.15
82	8.34	8.14	7.54	9.04	8.34	8.04
84	8.24	8.04	7.44	8.54	8.24	7.54
86	8.14	7.54	7.34	8.44	8.14	7.44
88	8.05	7.45	7.25	8.35	8.05	7.35
90	7.55	7.35	7.15	8.25	7.55	7.25
92	7.47	7.27	7.07	8.17	7.47	7.17
94	7.38	7.18	6.58	8.08	7.38	7.08
96	7.30	7.10	6.50	8.00	7.30	7.00
98	7.22	7.02	6.42	7.52	7.22	6.52
100	7.15	6.55	6.35	7.45	7.15	6.45
102	7.08	6.48	6.28	7.38	7.08	6.38
104	7.02	6.42	6.22	7.32	7.02	6.32
106	6.55	6.35	6.15	7.25	6.55	6.25
108	6.49	6.29	6.09	7.19	6.49	6.19
110	6.43	6.23	6.03	7.13	6.43	6.13
112	6.38	6.18	5.58	7.08	6.38	6.08
114	6.31	6.11	5.51	7.01	6.31	6.01
116	6.26	6.06	5.46	6.56	6.26	5.56
118	6.21	6.01	5.41	6.51	6.21	5.51
120	6.15	5.55	5.35	6.45	6.15	5.45

New Frog Plastic Construction Kits

(By P. R. Boreel)

It is some months now since the first of a new series plastic construction kits have appeared on the shelves of the hobby shops. The kits are manufactured by International Model Aircraft Ltd., London, a company of the Lines Bros. Group and are marketed under the Frog label.

The aircraft are all made to the popular 1/72nd scale and the ships are all 1/500th. I have had the pleasure to have built a model of every kit so far released in Australia. The quality of these kits are exceptionally good, the presentation is appealing, the instructions are ample, the transfers are good. On the whole the kits more than favourably compare with any other make on the market. The price, well ! It's terrific.

The aircraft kits to date appear in four series :

(a) Blue series, consisting of Percival Proctor IV, Hawker Sea Fury X, Miles Magister, Miles Master III, Fokker D 21, Dewoitine D 520 C, all priced at 4/9.

(b) Red series, consisting of Bristol Beaufort II, Westland Wessex I, Airspeed Oxford II, G.A. Hotspur II, priced at 5/9.

(c) Orange series, consisting of the Martin Marauder II, priced at 12/6.

(d) Green series, consisting of Martin Baltimore and Douglas Boston III, priced at 10/6.

The ships come in two series.

(a) Orange series, consisting of H.M.S. Revenge and H.M.S. Exeter, priced at 12/6.

(b) Red series, consisting of H.M.S. Ashanti and H.M.S. Torquay.

I would like to make the following comments on the individual kits :

(1) Percival Proctor : The model of this widely used training aircraft was easily put together and offered no difficulties.

(2) Hawker Sea Fury X : In my opinion this is the most value packed kit in the Blue series, the finished model with its rockets, long range fuel tanks and 5-bladed prop., looks worth a lot more than its price ticket. I would have liked to have a choice of transfers as this plane was used by many other countries.

(3) and (4) Miles Magister and Miles Master : The Magister has a rather frail undercarriage and does not stand up to rough treatment and should be well kept out of reach of junior.

(5) Fokker D/21 : The only fault I can pick in the instructions is the way to apply the transfers on the wings, the white sector should point to the back of the wing, not to the sides as indicated on this sketch.

(6) Dewoitine D 520 C is a model of a lesser known fighter of World War II and has given me no troubles in assembly.

(7), (8), (9) and (10), Bristol Beaufort II, Westland Wessex I, Airspeed Oxford II and G.A. Hotspur II : These kits at the extremely low price of 5/9 are excellent value and are the cheapest in comparison with any other make of kit on the market. The models come up very good and should all find a place in any collection of 1/72nd scale models.

(11) Martin Marauder is so far the only member of the Orange series. I would have liked to have seen the engine cowlings made in one piece instead of three, mainly to obtain a smoother finish. Also I think it a pity that Frog has not provided sufficient lead weights to balance the model on its undercarriage as they used to do in their earlier kits. Alternate markings for, let's say, American or French Marauders would, I'm sure, increase the demand further for this wonderful kit.

(12) The Douglas Boston III : The same comments as made under (11) apply here.

(13) Martin Baltimore : The only comment I like to make is the shape of the pilot' cockpit canopy. It appears to be a little too flat.

All in all, I think Frog has produced a terrific batch of kits to date and I'm certain that all 1/72nd scale modellers will always be looking forward to the next new model, which should appear at the rate of no less than one per month. The next one is, I believe, the Martinet.

In concluding this article, I like to say something about the ship models. The scale is 1/500th, which is similar to the ships of the "S" series of Renwal, and, therefore, one can build up a sizeable navy in miniature. H.M.S. Ashanti is a "Tribal" class destroyer and the R.A.N. has three of this type on strength, i.e., the Warramunga, Atrunta and Bataan.

The "Torquay" is a ship similar in outline to the new "Parramatta" class anti-submarine frigates.

The H.M.S. Revenge and H.M.S. Exeter were well known ships during World War II. The Revenge has since been scrapped and the Exeter of the River Plate fame has been sunk off the coast near Surabaya, Java, in February, 1942

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