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REPORT \& RESULTS $\star$ NEW O.S. \& SILVERTONE MULTIS



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I have another set of 10 channel F. \& M. Hercules Transmitter and Midas Receiver, also a set of 8 channel O.S. for sale together with Transmites and Duramites. The reason for the sale of the F. \& M. gear is that I have traded it on the new F. \& M. Matador, Midas Combo; once you use F. \& M. gear you'll use nothing else.

Of interest to all multi flyers is the new Matador and Midas. My set has arrived for use in a Jerry Nelson's Sultan. The Transmitter is the only read hand held Multi Transmitter on the Australian market. It is a little wider and shorter than the average hand-held single channel transmitter, it is fully transistorised and operates on a 6 V lantern battery, has a meter on the front of the case for checking battery voltages (press a button); also shows radiated power. It has out-of-sight range.

The Midas receiver is a superhet., fully transistorised and operates off 6 V . It measures $27 / 8^{\prime \prime}$ $\times 2^{\prime \prime} \times \mathbf{1 " '}^{\prime \prime}$; small for a superhet., and has the latest Medco Reed Bank not yet seen in Austraiia.

Arriving shortly, Top Flite Taurus and Tauri Kits, Jerry Nolson's Sultan Kis and Stirling Spiffiro Kits.

In stock, the Slot grip Screwdrivers as reviewed in the Christmas Aeromodeller.
SMALL - : : : $:$ LARGE -------- 19/6 (Posied).

## Don Farrell's Hobby Shop

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Write for further particulars.

# MODEL NEWS 

Vol. 7 No. 1
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The last issue printed was December and in it I asked for comments on the new size and colour cover, all but one comment was favourable and here it is printed in its entirety. I refuse to comment and anybody that would like to have a piece of him, you have his name and address, so let him have a small sample of what I get every day.

143 Linacre Rd.,
Hampton, Melbourne,

4/3/1963.
The Editor,
Model News.
Dear Sir,
Enclosed you will find a report on some recent Victorian competitions which I hope will be suitable for publication in Model News.

I am still waiting for a reply to my last letter in which I asked you what

## CONTENTS

C. S. Rushbrooke ... Page 8

Team Proto Flying
Page 10
Report on Aust. \& N.Z. Nats. Page 12

Radio Roundabout Page 33
Gadgets
Page 38
Club Notes $\qquad$ Page 40

## COVER STORY

Ross Woodcock, N.S.W. this years winner of the event holding the model just prior to its test flight. The flnish on this model was exceptional.

form 3 view sketches of teamracers, etc., should take. I assume now that you don't want these, and would prefer to allocate the space to more pages of Radio Rubbishbin. There are strong mutterings of discontent about the form your mag. has been taking lately, and people are getting tired of paying $2 / 6$ to read about radio control and beginners' models. Radio control may be the fastest growing branch of our hobby, but it is not yet the largest (the Nats. proved it), therefore if radio is to get its own special section in Model News you might at least have the decency to give control-line the same chance.

Another thing : Why can't you write a decent editorial and save your (?) trade comments for another part of the magazine.

Continued on page 45

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## C. S. RUSHBROOKE

(By Ron Moulton)

It is with deepest regret that we have to inform you of the death of our Director, Mr. C. S. Rushbrooke, who was always more familiarly known to the aeromodelling fraternity as "Rushy." He collapsed at his home on December 26 and died in hospital on January 3.

He had been connected with "Aeromodeller" for more than 22 years, first as contributor, then as Editor, Business Manager and Advertisement Director. From 1935 to 1940 he was an active aeromodelling competitor having flown in several international meetings and was the holder of a British record for indoor model flying. During these years he was secretary of the largest and most advanced model club in Great Britain, the Lancashire Model Aircraft Society, and it was through his experience as secretary of this club that he was able to be of such great assistance to the Society of Model Aeronautical Engineers.

His efforts on behalf of aeromodellers in the North of England were rewarded by his election to a Fellowship of the S.M.A.E. in 1940. Since 1938 he has been a member of the executive council of the S.M.A.E. and directly responsible for the organisation of World Championships at the College of Aeronautics, Granfield, for Free Flight events; and the Royal Air Force, Cardington, for indoor meetings. His liaison with the Royal Air Force enabled the S.M.A.E. to negotiate the use of several Service airfields for major competitions.

Additionally, he was the past president of the Model Trade Federation of Great Britain and was currently the


Vice Chairman of that organisation. He was influential in establishing good relations between the Modal Flying Assoc:ation and the Model Trade.

His work on behalf of the N.Z.M.A.A. at the F.A.I. Models Commission over the past two years has been much respected by fellow delegates and his appointment to the International Radio Control Model Sub-Committee, promised work of inestimable value in the establishment of wholly satisfactory international regulations. His face and figure were so well known and his friends so innumerable. It will be very difficult for any of those who knew him so well to accept the shock of his passing. He leaves a devoted wife Lily, who has always supported him so well in his hobby activities, and a son Peter and daughter, Joan.

## Skylark .29-. 35 Stunter

## (By Allen Edwards)

"Skylark" is a 56 inch span stunt model capable of completing the F.A.I. Pattern, also for doing sharper manoeuvres such as the hour-glass. Built to the plan, using selected materials as indicated, the "Skylark" should have 2 . total weight of 36 ounces, and for the large area in the wing it is essential that the wing be built warp free, if not the model will tend to float in some manoeuvres. If a warp is present when completed an aluminium trim tab can be added to counteract any such warps. With the outboard wing 4 inches shorter than the inboard, 1 oz . tip weight is sufficient, but if any doubt exists, more can be added without any worry to the flying ability, the original model, although a bit jumpy in turbulent conditions was very stable in vertical and overhead manoeuvies. The tank indicated is of the type used in the "Rimflre" (another Model News Plan), except for the baffle which is essential for the sharp manoeuvres. When completed the model should balance where indicated, if not, weight can be added to either the nose or tail to correct it. If welght is added fix in solidly to stop any shifling.
C. S. Rushbrooke


# A LITTLE ABOUT A NEWER CLASS PROTO SPEED FLYING 

(By John Morgan)

A new class at a "Nats" often get a good roll up, first out, and then fizzes or vice versa. Proto had good entries when started at Echuca, but most were team racers and the lads left the models in their boxes when competition day came around. This was summed up by Kev. Green, "My team racer is one of the fastest, but. isn't near quick enough for these proto boys." This year a team racer placed second in the event, but had a beautifully reworked racing 29 up iront, the moral seems to be in "the fan" but a model is very important if only to make the fan fly.

The Model in Aust. Team Racers tend to dominate proto qesign complet with inverted motors etc. To me this is the wrong approach, as inverted motors with their inbullt high thrustline run far too long on the ground for a fast acceleration time. Essentlals would seem to be :

Light Weight: About 22-24 is strong enough and is generally accepted in theory and practice as a good enough welght to get going.

Fast Lift Off: Here an upright motor steep ground angle, light weight and a fast turning $8 \times 8$ fill the bill.

Smooth Flying : This is more of a problem than is generally conceded, a factor that greatly affects a speed model is whether or not the model points into or away from the circle, a little care spent in slghting along the wing of the model when fying and bending the tip guide to suit, pays handsome reward in flying abillty and


This ship incidentally has won 5 contests in a row. Only defeat at hands of N.S.W. officials. No competitor has managed to beat it.
speed. If in doubt build a good design that has shown its ability to fiy well.

General Toughness: This doesn't mean carving from the solid spotted gum, but this size model is good for general field use. so make it tough and compact without too many weak features like butterfy tails. Good performance can only be had from any type of model by flying and learning the tricks in practice, so build a model that doesn't have to be used "For Nationals Only." Besides Proto models are nice flying aeroplans or should be.

Motor Accessability: There should be enough room for controls, tank and a few varlatlons on the tankage that always seem to crop up, so leave it get-attable. Far too often bods close the cooling slot down to about nil, this is very silly and results in a poor motor run and eventually a distorted set of going parts in the motor. Be sure if this is the case, to blame the manufacturer for a poor motor. Minimum cooling for Proto should be a head in the breeze and a good cooling slot in the cowl, $13 / 4 \mathrm{in}$. by $3 / 8 \mathrm{th}$ of an inch is good for a start.

Lastly, don't try too hard to get everything inside the model, leave a few bits accessible, worry about little detalls when your speeds start to climb satisfactorily.

The Motor: Which motor to use ? Without trying I'll successfully tread on a few manufacturers' corns. My findlngs are that broadly racing 29's for 2 classes. rear disc Induction and front rotory, The rear disc motor tends to cough and splutter when let go for a short bit, then settle and scream probably caused by fuel tending to fall behind as the model fumps off the mark. Front rotary motors don't seem to suffer this hazard but there is always the exception. A good general rule is to plek a type of motor that has proved successful in this field.

Modiflcation of a motor is best left to the people who know what they are rulning. A well run-in motor properly handled has a very good chance of winning. Two of Australia's 5 speed records are held with stock motors (B speed. Dooling FAI K \& B 15R).

Tanks: For a standing start event of this nature a suction feed tank is not good enough. A metal pressure fed tank is quite satisfactory if it doesn't vlbrate and froth the fuel. About 35 cc of fivel is sufficient if a pen bladder is used. Be sure not to compress the pen bladder inside the fuse or in a too small balloon. a change of setting will occur when thls type of restriction eases, result loan holf run or so (don't mention names but I dld this at Camden Nats). Pen bladder Monorally is more tricky to hand start than " bressure system and has less chance of 11 lonk even run, also the needle valvo sottink is altered every time the motor is miurtod-a bls advantage of a pressure tank, tho nbllity to gradually adjust the $N / V$ sotllik over several flights.

Fuels: Whenever the avorafo competition modeller thinks of fllto nulhane he automatically adds $\mathfrak{a}$ gooll porcunlake to his
potential performance, forgetting that unless his motor is used to the fuel being used. the chances are that the piston wll expand a little more than usual, and the model won't gain at all, quite probably 80 slower. At my own expense, I flew proto at Camden on 28 per cent nitro for a 111 m.p.h. S/S run, about five days later the same speed was repeated on 4.1 shell $A$ castor fuel that the motor is used to, more or less indicates that exotic fuels are best given to the opposition, especially if they normally use cool running fuel.

In U.S.A. the generally used speed fuel has 45 per cent nitro methane and if the motor has the necessary clearances for this fuel, it appears to be as fist as higher nitro luel, but due to the cost and unavallabillty of nitro the modeller would be wise so get used to a milder fuel, after all everything is bigger and fâster in the U.S.

Props: As everything else is in the compromise bracket a fixed pitch prop for a standing start jaunt has to fill two bllisfast jump off and high speed. With a powerful motor that is capable of a good high rev. wind out an $8 \times 8$ stant is a good start. Try trimming diameter to $75 / 8 \mathrm{th}$ inch and reducing pitch at the tip with sandpaper to aid jump off the mark. Some motors that don't want to rev. out, particularly newish specimens, like a 7in. $x$ 9in. prop. better. This is a try and see proposition.

Tuning the Motor: For best performance this motor needs careful tuning, not with a wood rasp, just finding which plug fuel set-up etc., work best. Remember that as a motor runs in it runs cooler and a warmer plug is needed to keep the same results.

With fuel settings it was generally noted the lack of care in reducing ram alrs leaning out effect as speed climbs. This leaning effect is O.K. for ordinary speed events, but in Proto the motor has to scream on the ground, if it runs richish when let go it can add 2 secs. to your time in the first $1 / 4$ lap, even a rlch cackle at take off adds 4 sec. to my Proto model, so take care to get a good even peak run throughout the measured mile. Probably the two greatest villians here are nervous fingers on the $N /$ valve or a motor that is too new and tight for the job it's belng asked to do.

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Class II Proto Speed.
Junior ${ }^{1}$ A Team Race.
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Class II Team Race.
Chuck Glider.
F/F Scale.
Power Scramble.
F.A.I. Team Race.

Junior Combat.
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Tick Events you wish to enter in.

Entry Fee 5/-. Nomination Fee $3 /$ - per event.
Closing date for entries - Friday, 5th April, 1963. Postal entries postmarked 5 th April, 1963, will be accepted.

Late entries - Double the above fees accepted until MIdday, 12 th Aprll, 1963.
Processing: All models, except scale, will be processed on Friday, 12th April, and must be submitted before 8 p.m.
The Management reserves the right to change any event at any time if circumstances so compel. Entry fees must accompany entry form and all moneys shall be made payable to the N.S.W.A.A. and addressed to:-

The Secretary,
Box 3530, G.P.O.,
SYDNEY.

DECLARATION: I hereby agree to accept the Contest Director's and Appeals Committee's decisions as final and to comply with any requests made by the N.S.W.A.A.

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I am entering in events and enclose

Name
Date of Birth if Junior
Address
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# Reports on Australian and New Zealand Nats. 

## NEW ZEALAND NATS NEWS

At the moment (this issue is being written the night prior to the date of issue) the weather is pretty lousy-cold, with a keen breeze that dosn't help matters at all. In Britain they would call this a nice mild Christmas, but this here's New Zealand, and we've Just had the longest day of the year. This weather, if It's any consolation is apparently nationwide, and the South Island boys especially have had a tough time getting to Fellding, and several are still in transit somewhere between Picton and here. The Auckland boys reported snow right down to the Desert Road, with very strong winds. There was more snow well down on the Ruahines, according to the Hawkes Bay Boys, also accompanied by very strong winds.

The camp seems to have settled down fairly well, but it's about time someone invented luminescent guy ropes, as traversing the pathways between the tents at nlght can be quite adventurous and there is the odd car parked smack in the middle of the drlveways to make the night wanderer's progress all the more exciting.

Processing appears to be progressing quite smoothly, with the odd model apparently having lost welght since last checked on the home scales. Doubtless there will also be the odd team race tank that will have grown since the builder soldered it up. One interesting model seen was John Sheppard's Nordic A.2., that spans 130 inches-with a $31 \%$ inch chord. Trimming of this model has not yet progressed beyond the hand-glide stage, and it should be interesting to witness its flights tomorrow morning.

There are appareatly 24 entries in Indoor ranging from Henry Grocock's Super $C$ of 28 Inch span, to the ublquitous Easy B's of the Opper Hutt and Palmerston North Clubs. It is hoped that the weather and hall come up to expectations, and the many modellers in New Zealand who have never seen this class flown, will have the opportunity of so doing. At a meeting in the Mangara Hall last Wednesday night, Henry managed 11.51, with several others doing over 10 minutes. And they say Indoor is dead!

Honour of losing the first model at the Nationals must go to Colin Boyd of Palmerston North, who carefully filew his radio model backwards out of the field in a high wind.

Several interesting scale c/L jets about. One well worth a good look at is Nev. Dawson's Grumman Panther-how he put that minute lettering on is an expensivs trade secret. The warning notice lettering is legible, and no more than $1 / 64$ th of an inch high. A lot of discussion centres around Phil Staple's Lockheed F. 104 Starfighter: this model weighs around 6lb., which must surely give it a wing loading of around 6lb. ner square foot Will that Dynajet keep it in the alr?

Peter Levett at the Nats. briefing session, seemed concerned about the relatlvely high speed of his Class $B$ Team Racer: if he is drawn in a heat with some of the Central Provinces entries, he should find out that there are models doing those speeds thereabouts for a couple of years now. One way to stop gluefooting in the centre is to do as the Aussies do. and slad a 46 gallon oll drum in the centre of the T.R. circle for the pllots to walk around (Not any more we don't. Editor).

Points brought out at the Nats. brlefing that should be borne in mind include: No running of motors. nor flying of models. in
the racecourse, before 8.30 in the mornings. If the horses are still being exercised after 8.30, no flying or motors until they have gone. We don't want to see a stallion break the lap record under the urging of 23.000 r.p.m.

## RESULTS

Power Class A: 1st, N. S. Hopley, Mt. Roskill, total 481.4; 2nd, M. Stevens, Christchurch, 434.1; 3rd. B. Keegan, Auckland. 422.3.
H.L. Glider : ist. T. Martin, New Plymouth, 338.6; 2nd, G. Bowden. Mt. Roskill. 332.0; $3 \mathrm{rd}, \mathrm{J}$. Armstrong. Ashburton, 286.5.

Wakefield : 1st, A. Macauley. Kaiapoi. 891.5; 2nd, J. Malkin. Upper Hutt. 853.7; 3rd, B. McGarvey, Auckland, 841.0.

Radio Control Multi: 1st, E. G. Hartley. Palmerston North, Aeroneers, 89; 2nd. Colln Boyd. Palmerston North Aeroneers, 80; 3rd, Bob Milne. Fastings. 75.

Class A Team Race: 1st, P. Bernard. Auckland, $5: 28.0 ;$ 2nd. D. and R. Kennedy. Oamaru, $5: 51.9 ; 3 \mathrm{~d}, \mathrm{~J} . \mathrm{T}$ Wooley, Kalapol. 5:54.2.

Aerobatics: 1st, N. Dawson, Upper Hutt. 398; 2nd, P. Wheeler, Kalapoi, 367: 3rd, R. Goding, Christchurch 363.

Indoor Flying: 1st, Bruce Keegan. Auckland. 408.7; 2nd. Brian Roots, Wellington, 326.0; 3rd, Wellington Choy, Wellington. 316.7.
F.A.I. Power: 1st, Blll Cook, Upper Hutt, 782.8 ; 2nd. Malcolm Scott, Kalapoi. 7i8.9: 3rd, Paul Lagan, Christchurch. 716.9.

Class B Team Race: 1st, Tony Cook. Christchurch, 8:6.1; 2nd. Gary Partridge. Southland. 9:10.4; 3rd. Joh̆n Cromble. Wellington, 9:0.9.

1 and 2: The captions for these two fine models have been mislaid. I think they came from Kemnsey, they build them by the dozen down that way. 3: One of modelling characters, Ray Murrav of Canberra and his ex R/C Saucer which was flown (?) in the power scramble.

4: Laurie Cantwell of Sydney, with one of his speed models. Laurie is making a verv successful comeback after years of retirement.

5 : John Smith of Grafton, was flying this missile at Coffs Harbour. It's a : Gee String with added dihedral, Silvertone, Taipan 2.5 Glo and Varicomp. 6 : Ron De Chastel of Brisbane, designed and built this beauty for a "Silvertone" R/C 50 inch span Taipan 2.5 Glo, flies well.

7 and 9: This is a small R/C or $\mathrm{F} / \mathrm{F}$ hit, available from Angus McDonald of Modelair Ltd., 322-4 Broadway, Newmarket, Auckland N.Z. It can be built as a low wing, cabin or shoulder wing for both R/C and F/F for 0.49's. N.Z price is only $29 / 6$ about $£ 2$ Australian. The sample kit is very good value in a striking black and yellow box.

8: Col. Boardman of Grafton, won the free running boat class at Coffs Marbour with his nicely finished R.A.F. crash boat with a Taipan 2.5 marine.


C/L Scale: 1, Nev. Dawson, Upper Hutt. 810 (Panther); 2, Laurle Ackroyd, Hawera, 700 (Southern Cross): 3, Bruce Keegan, Auckland, 572 (Great Lakes).

Radio Control Single Channel : 1st, Mile Kendrick, Wanganul, 91 ; 2nd, Angus MacDonaid, Auckland. 77; 3rd. Dave Whitehead, Hastings, 76.

A/1 Sallplane: 1st, Peter Levet, Auckland, 665.5 ; 2nd, Ian Barber, Wellington, 634.8: 3rd, Ross Glenny, Wanganul, 603.2 .

Class 1 Speed : Ist, John Winn, Auckland, 109.1; 2nd, Allan Clarke, Lone Member, 107.8; 3rd, Bill Cook, Upper Hutt. 105.8.

Class V Speed: 1st,, Barry Deakin. Palmerston North, 118.4.

Payload : 1st, Steve Raskin, Levin, 779.1; 2nd. Brian Roots, Wellington, 602.8; 3rd, Noel Hewltson, Auckland, 519.4.

F/F Scale: 1st, Bob Milne, Hastings, 702 (Tiger Moth); 2nd, Laurle Ackroyd Hawera. 602 (Beaver): 3rd. Noel Hewitson, Auckland, 478.

Speed Class 111: 1st, Phil Staples, Wanganul. 124.2 m.p.h.; 2nd. Allan Clarke, Lone Member, 122.6; 3rd, Chris Thompson, Dunedin, 104.1.

## 16th AUSTRALIAN NATIONALS - REPORT

## (By Bert Ronke)

There was quite a good turn up of scale models for control line scale at the 16th Nats. Of 15 entrants, 10 turned out and of these two falled to qualify, one withdrawal and one disqualification. It was good to see the scale modellers paying more attention to engine starting procedure this time. Of the 10 only one failed to get away within the third attempt.

The final outcome was quite close with one point separating 1 st and 2nd, with 3rd 35 points away. Ross Woodeock 1st. 144 points; Allen Talbot, 2 nd, 143 points and Bill Robson 3 ra. 108 points. All three are from N.S.W., Victoria being most unlucky as but for lack of information, they may have taken 3rd place.

First to fly was Arthur Cooper with Alan Talbot's beautifully detalled DeH4 getting away on the second attempt. This fine model was bullt in Talbot's usual immaculate fashion having everything except a cuspidor. This plece of art gained for Alan, with Coop at the stick, 40 points for flying, -18 polnts for fldellty to scale and 85 for attention to detail, colour, etc. Blll Robson was next away with his nicely detailed DeH Mosquito decked out in P.R. colour scheme. Bill must sleep with those two O.S. . 15 's diesels as he was airborne approximately 70 seconds after he was clocked "on." This earned Bill a bonus of 15 polnts. The take off was quite natural, while the attitude in flight was just a bit shaky, but he earned 40 polnts for fyling.

A very neatly finished Tipsy Junior by G. Hughes was next away but (my heart bleeds). . unfortunately pilot and plane could not co-operate and that old devil Wind took over and . . . well that's all, you work it out. That Forker $E$ lli by young Jim Densham was a very gallant and game effort as Jim is about 14 years old and he came 4th amongst all the big boys. Jim put in a very good flight effort with 40 polnts. He sure knows that engine. One flick and he had 15 bonus points and 8 points for landing very masterfully in a lousy wind. Watch out for yourselves, you big boys, when Jim has had say two years' experlence.

Most unfortunate man of the day was D. Harlow who was proxy flyer for L. Edwards of Victoria, who built a fine looking Avro Anson with retractable landing gear and flaps. This model was at home both in the alr and at take off, but due to stage fright or some little gremilin, the motor would cut after a lap or so, with a result the model was damaged during its first atempt. How-
ever. hurried repairs by her pit crew put her back OK. Full honours must go to D. Harlow for the masterly way in which he saved that ship from destruction-and he earned 39 points for flylng on one motor with undercart and flaps earning 10 points each. Unfortunately, the bullder forgot to send proof of colour and markings and so missed out on third place as a result. The most natural take off of the day must surely go to Ross Woodcock of N.S.W., who flew his falthfully reproduced Boeing Steerman Kaydet with throttle. This work of art was so realistic $I$ almost jumped into it (no not on 1t!) Top scoring to 22 points for fidellty to scale, 37 points for flying and 85 points for attention to colour markings. detail, etc. Powered by a .35 ci . engine it welghed about ${ }^{1} \frac{1}{4}$ lbs. This ship also sported working nav. lights
R. Hill was a trier with his Stuka dive bomber which was to have dropped a bomb. but the bomb was lost on take off. In true Nats. tradition, this lad finished his model at the Nats.

Next we have J. Wynne of Victoria, with his beautifully finished DeH Mosquito, with detalled cockpit and electrically retracting undercarriage via screw jacks actuated on the application of full up elevator. Unfortunately this probably proved his downfall as the alrcraft was damaged on heavy contact with the green carpet and was forced to withdraw.

An SE 5A by F. fBattan. N.S.W., bullt from an unmodified Sterling kit looked and flew well and in typical SEj fashion (How would I know? ) overturned on landing. Unfortunately this model was disqualified as he falled to inform the judges of the ratio of his model to plan and also had nothing to prove his colours and markings. Remember this . . . all you potential scale modellers.

In Free Flight scale there was a little mix-up about starting time, but it got away all right at 11.53 a.m. The placings for this event are as follows: Ist, A. Talbot. N.S.W., 120 points; 2nd., R. Greenhill, Victoria, 115; 3rd, C. Cox. N.S.W., 76.

1: Les Fahey, N.S.W., and Piper Pawnee F.F. model dropped duct and all but failed to R.O.G.
2: Tarn Stowe about to launch on his winning flight in Junior rubber.
3 : Last year's champ. of champs., Shawn O'Connor of Vic and his nicely finished A.2.
4: One of the Campbelltown, N.S.W., entries was this small "Tipsy" powered by a Pee Wee provided the best prang into the tarmac, exit, one motor.
5 : Ford Lloyd fuelling up the best F'A.I. power job we've seen in a long time. Contest Director Coop has the watch at the ready.
6: Class 2 team race winners (centre) kwith place getters either side. Enya powered model did 7.12 in one heat!
7 : Combat winner Ken Lloyd fuels his model ready for the flnal.
8: Bob Wallace with miniature R.C. ModelKraft relayless, Ace 1 A pulse actuator. Cox $.049,141$ ozs. flies like a bird. 9: Alan Talbot's winning F/F the Etrich Taube. Good detail and a steady flyer, Pee Wee powered.


First away was Art. Cooper flying Alan Talbot's beautiful Etrich Taube. Due to the ultra light weight of this model it was difficult to get it airborne in the breeze that was blowing and so Alan recelved no time bonus but 2 loops were nominated and executed (I'd like to see it agaln!) with about 4 inches ground clearance on the first and 2 ft . on the second, and she rolled off the top of the third as the motor cut and it floated down to a beautiful landing. The total flight points was 16, with 86 points for general details as per scale subject and general appearance and markings and colours. This flying "cob-web" had wires everywhere. In fact the only place it could be safely picked up by, was the airscrew.

Les Fahey. N.S.W., had a very neatly finished Pip Cherokee crop duster with a working hopper. Unfortunately, Les didn't have time to trim the model and when it finally lifted into the air it winged over and struck heavily enough to put Les out of the running.

A very neat little (and I mean little, with about 18 inches W/S) job was Dick Everet's (N.S.W.) Tipsy Junior powered by a Cox .020. This model was no doubt overpowered. as a matter of fact it would have made a good account of itself on 30 ft . Ines. Unfortunately the torque was too great and the little beast ploughed into the runaway and broke the crankshaft.

A well trimmed model of Spitfire in Photo "Ree" white was a pleasant looking job in the air. It looked like the real thing up there cavoting around the sky like it was on ralls, and very fast at that This model is the work of C. Cox of N.S.W. and is very well sealed and finished.

Bob (Ultra-light) Greenhill of Victoria. with his H-J-G-E Bristol Bulldog took the air next in such a realistic manner that I had goose bumps, and if that wasn't enough, the slow easy flight looked even better. This was easily the most fantastic take off and flight I have seen in a model. It earned for Bob 36 points topping the scale, but for lack of small detalls such as markings in allerons and elevators, Bob (I warned you) was placed a mere 2nd.

## RESULTS

Chuck Glider: 1st, A. Berrie, N.S.W., 180 secs; 2nd, D. Hegarty, N.S.W., 170; 3rd, S. O'Connor, Victorla, 164.

Free Flight Scale: A. Talbot (Erich Taube), N.S.W., 120: 2nd, R. Greenhill (Bulldog), Victorla, 115; 3rd, C. Cox (Spltfire), N.S.W. 78.

Power Ratio $1:$ 1st, W. Penfold. S.A., 24.21; 2nd, R. Lloyd, victoria, 21.1:1; 3rd. B. Potter, N.S.W., 19.1:1.

Power Ratio 11: 1st, W. Penfold, S.A., 21.6:1; 2nd, R. Gleeves, Vic., 20.9:1; 3rdi, D. Pope, N.S.W., $20.1: 1$.

Power Ratio 111: 1st, R. Lloyd. Vic., 15.45:1; 2nd, A. Cooper and K. Murray, N.S.W., 13.3:1: 3rd, W. Penfold, S.A., 12.2:1.

Power Scramble : 1st, I. Stowe, N.S.W.. 14.36; 2nd. D. Hegarty N.S.W. 13.45; 3rd, J. Ray equal with K. Murray, N.S.W.' 13.02.

Open $1 / 2$ A Team Race: 1st, J. Partland, N.S.W., 56.9; 2nd, Holmes and Silver. S.A., 11.54.8; 3rd, S. O'Connor, Victoria, 12.19.6.

Class 11 Team Race: 1st, J. Partland, N.S.W., 7.31.9; 2nd, N.S.W. 7.48; 3rd, K1t Haltham, Vic., 9.46.9.

Advertiser Trophy: J. Partland, N.S.W.. 7.37.4.

Class 111 Team Race: 1st, Wilson and Cotter, James Cincotta, Vic., 825.7; 2nd. E. Harris, Q'ld., 94.7; 3rd, Peifer Hughes, Vic.. 9.24 .

Control Line Scale: 1 st, R. Woodcock. (Steerman Cadet), N.S.W., 144; 2nd. A. Talbot. (D.H. Fuller), N.S.W., 143; 3rd, W. Robson. (Mosquito), N.S.W., 108.

Combat: 1st, E. Lloyd, N.S.W.; 2nd, J. Jacobson, Q'ld.; 3rd, A. Kerr, N.S.W.

Class 111 Speed: 1st, A. Kerr, N.S.W., 17.1 secs. ( 130.8 m.p.h.); 2nd, J. Morgan, N.S.W., 17.5 secs ( 127.8 m.p.h.) ; 3 rd , L. Cantwell, N.S.W., 18.1 secs. ( 124.3 m.p.h.).

Class 111 Speed: 1st. P. McGee, N.S.W.. 15.3 secs ( 146.2 m.p.h.); 2nd, L. Buck, S.A., 15.6 secs ( 143.4 m.p.h.); 3ra, I. Cantweli. N.S.W., 15.8 secs ( 141.6 m.p.h.).

Class 11 Proto Speed: 1st, K. Morgan. N.S.W., 32.4 secs ( 111.3 m.p.h.); 2nd. J. Jacobson, Q'ld., 33.4 secs ( 107.8 m.p.h.): 3rd, K. Fryer, Vic., 35.5 secs. ( $101.5 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.$) .$

Intermediate Radio: 1 st , L. Windley, N.S.W., 3,298 pts.; 2nd, N. Fell. Victoria. 2,823; 3rd, M. Windley, N.S.W., 2,178 .

Junior $1 /{ }_{2}$ A Team Race: 1st, Stretch \& Palderman, Vic., 12 mins. 31 sec.; 2nd, Dention and Babbington, N.S.W., 17.51; 3rd, L. Follett, Vic., 18.55.9.

Junior Stunt: 1st, I. Brown, N.S.W.. 1,603 points; 2nd, G. Lynch. N.S.W., 1.517.3; 3rd, L. Follett, Vic., 1,457.3.

Junior Combat: 1st, C. Parry, S.A.; 2nd. J. Hughes, Vic.; 3rd, W. Blakely, Vic.

Wakefield: $1 \mathrm{st}, \mathrm{S} . \mathrm{O}^{\prime} \mathrm{Connor}$, Vic.. 900 secs.; 2nd, W. Penfold, S.A., 840.5; 3 rd. J. Christy, N.S.W.. 762.
F.A.I. Power : 1st, K. Murray, N.S.W.. 796 secs.; 2nd, R. Greaves, Vic., 745; 3rd. T. Carver, vic., 644.

Multi Radio: 1st, T. Prosser, N.S.W., 3,576 points; 2nd., B. Heaiey, N.S.W., 2.514; 3rd, J. Marquette. N.S.W.. 1,510.

Single Radio: 1st, T. Prosser, N.S.W.. 2,867 points; 2nd, L. Winley, N.S.W., 2.442 3rd, N. Winley, N.S.W., 2,313.

A/2 Sailplane : 1st, R. Wilkins. Vic., 817.7 secs. 2nd, S. O'Connor, Vic, 735.3; 3rd. L. Hay. N.S.W., 683.

Stunt: 1st, L. Turner, N.S.W., 2.084.9 points; 2nd, B. Harlow, Vic., 1,984.9; 3rd, K. Taylor, Vic., 1,978.6.

Best finished model in stunt, I. :Brown. N.S.W.
F.A.I. Team Race : 1 st, D. Eather, N.S.W.. 5 mins., 37.3 secs; 2nd, L. Neiht, Q'ld., 7 mins. 14.5 secs; 3rd, Partland \& Jensen, N.S.W.
F.A.I. Speed : 1st, C. Wheatley, N.S.W., 20.5 secs. ( 109 m.p.h.); 2nd, L. Cantwell. N.S.W., 20.8 secs ( 107.4 m.p.h.); 3rd. R. Blonberry, N.S.W., 21.4 secs ( 104.5 m.p.h.).

Junior Hand Launched Glider: 1st. N. Coombes, N.S.W., 81 secs; 2nd, T. Stowe. N.S.W., 68; 3rd. L. Jarvis, S.A., 56 secs.

Rat Race : 1st, R. Towell, N.S.W., 293 laps: 2nd., R. Duance, S.A., 233 laps; 3rd, G. Barker, N.S.W., 200 laps.

Open Rubber: 1st, S. O'Connor, Victoria. 540 secs.; 2nd, R. Greenhill, Victoria, 434; 3rd.. R. Wilkins, victoria, 426.

Open Power: 1 st, B. Allcock, N.S.W.: 703.1 secs; 2 nd. $R$. Greeves, Victoria 634.6: 3rd, R. Lloyd, Victoria, 624.

Junior Open Rubber: ist, R. Wllkins, Victoria, 426 secs; 2nd. T. Stowe. N.S.W.. 292; 3rd, N. Allenby, Victoria. 253.

State Point Score: N.S.W., $831 / 2$ pts.; Vic., $33 \frac{1 / 2}{2}$ pts.; S.A., 13 pts.; Qld., 8 pts.

Senior Champion of Champlons: $W$. Penfold. S.A.

## MODEL AIRCRAFT SUPPLIES

## THE GREATEST RANGE EVER SEEN AT THE HOBBY CENTRE

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EaSY Starting • powerful • steady running

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## fact and fallacy about model motor fuels

The contest results achieved with blended "Airspeed" No. 5 fuel during the last two years, and before that, wins recorded with No. 3, must convince even the most diehard "home brew" enthusiasts that these commercial fuels have really "got something" for the expert.

Time and time again I have stated that fuels must be tailored to suit individual motors and conditions, and it is this final few per cent of water, methane, or benzol, etc. or more recently nitro ethane, which makes the difference between a good fuel and a championship fuel. This little extra cannot be put into a can to suit all various needs, and here is where the modellers correct observations of motor performance, and the necessary corrections are important.

Nitro Methane has for many years been regarded the ultimate as a power booster ${ }_{A}$ but recent experiments with other "Nitros" and blends of nitro have resulted in a combination at present being marketed under the name of Nitrothane " $A$ " and " $B$ ". For the first time, this $100 \%$ nitro compound is being marketed throughout the hobby trade at a reasonable price as a hot fuel additive.

Nitrothane has several advantages over straight Nitro Methane for most work, particularly its ability to run motors much cooler, and cleaner. Any ingredient which cools down combustion is particularly useful in Team Speed as it allows the inclusion of a greater percentage of those ingredients of high calorific values, which generally increase motor operating temperatures.

Another very welcome addition to the range of fuels and additives is Fox "BLAST" fuel. "BLAST" contains $50 \%$ Nitro, which means that at last Australian modellers have available regular supplies of very high Nitro fuel which will satisfy the keenest Speed flyer or Free Flight expert, and as the Nitro content is so high "BLAST" will prove ideal for blending with other fuels, where a Nitro content increase is desired.

Although 19/6d. per pint may on first impression appear expensive, those modellers who have purchased Nitro Methane realize the cost is usually at least $40 /$ - per pound, which of course makes "BLAST" at 19/6d. per pint ล
quite a reasonable price.
Speed flyers will no doubt use "BLAST" straight from the can, but other types of competitors are advised to use
"BLAST" in a blend with "Home Brews", Airspeed, or other fuels of their preference.
"BLAST" and "Airspeed" No. 5 should result in a top Team Speed fuel. "BLAST" and "Airspeed" No. 1 or 7 for Stunt, Combat, or Free Flight. "BLAST" and "Airspeed" No. 3 for Combat and Team Speed in lower compression motors.

Shortly Airspeed are introducing two new specialists fuels to the commercial market. Numbers 9 and 11 . Both of these fuels have a high Nitrothane content. Nine is blended particularly for Team Speed, and eleven for speed. "BLAST" should blend well with either of these new fuels.

No. 5 was used to win, and gain second place and 4th and 5th in the Class II(29) Team Speed Glo events at the last two Nationals, 61/62, 62/63. The same fuel set a new Australian Record at Easter in Norm Moore's model, a few months later this record was bettered officially by Jack Oehmes and Ray Silver, again using No. 5. In the 1000 lap International race held in Melborme recently, Norm Moore gained the fastest time in the 200 lap heats, and was twenty laps in the lead at the 400 lap mark in the final when forced to retire. The South Australian Championships resulted in all the finalists running on No. 5 Airspeed. Surely no other commercial fuel can claim such a list of achievements. Enya motors were used on all these occasions.

The secret, as already stated, is in the final blonding to suit individual uses. Blending in the case of Airspeed No. 5 is done with Nitro Methane, Ethane or Nitrothane, water and oil (or now Elast). Compression ratios of motors vary a good deal, as do weather conditions, particularly in regard to humidity. Repeated trial and error test flying, hour after hour, day after day, is the only satisfactory way to gain the knowledge of what is actually needed by a particular motor to give the ultimate in performance.

Generally speaking, greater quantities of Nitrothane are required than Nitro

# VERON 



## PRE-FABRICATION DE LUXE!



# WELCOME TO <br> OUR PLANT 

If's a mighty big plant for products so small. He could play loolball here at fox Manufacturing Company with room to spore. But our skilled workers and modern machines keep busy at a single task-producing the world's finest model airplane motors. About 1,000 a day come from our assembly lines to keep model oitcraft flying on the increase here and around the world. This brief photo tour may help you see why fox motors ore BIG in performance.


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A battery of Fox automatic screw machines. In a continuous operation these machines automatically convert steel bars into the Famous Fox crankshafts.


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## 'A/RSPEED'

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"AIRSPEED" FUELS GAINED ALMOST ALL MAJOR PLACINGS IN CLASS II TEAM SPEED EVENTS AGAIN THIS YEAR AT THE "NATIONAL CHAMPIONSHIPS", LAST YEAR'S "NATS" WAS THE SAME. DURING THE YEAR "AIRSPEED" TWICE SET NEW AUSTRALIAN RECORDS IN THIS CLASS... STUNT \& FREE FLIGHT TOO, NOW REQUIRE SPECIAL FUELS FOR TOP PERFORMANCE... ALL V. M. A. A. STUNT EVENTS, \& THE S. A. CHAMPIONSHIPS WERE WON WITH "AIRSPEED".

## NO "ALL AROUND" FUEL, EXPERTS SAY

"airspeed" Gives You a Choice of the BEST FUELS . . . Here is Why!

[^0]> fuels you can buy is proven by their championship performance at the Nationals. They have continually led the field over all other brands. More lst, 2nd, and 3rd places have been awarded to users
> -in all types of fying - than any other fuel.
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and development program, we have continually advanced the performance Today, better than ever! Our specially developed filtering process assures you of the cleanest fuel available...to provide better performance, longer life, and smoother needle valve adjustment.
 FOR TOP CONTEST "SPEED" FLYING, "BLAST" WILL FIND WIDE USE AS A BLENDING FUEL... TRY A CAN OF "BLAST" MIXED WITH OTHER FUELS TO "HOP-UP" THE NITRO CONTENT.
REMEMBER "FOX BLAST" contains 50\% NITRO For: TEAMSPEED: 4 Cans "AIRSPEED No. 5" to 1 "BLAST" STUNT: 8 Cans "AIRSPEED No. l" to 1 can "BLAST" F/FLIGHT: 8 Cans "AIRSPEED No. 7 " to 1 "BLAST"

FOX 049 the only $1 / 2$ A with BIG MOTOR PERFORMANCE


Stroke .148, Disp. .049, Wt. $11 / 4$ oz., Up to 25,000 RPM

FOX 10
MORE POWER THAN MANY 15 s


Bore . 530 , Stroke . 460 , Disp. . 10 ,
Wt. $23 / 4$ oz., Up to 15,000 RPM

## FACT AND FALIACY ABOUT MODEL MOTOR FUELS

(Continued from page 2)
Methane, but its virtues of cleaner running and cooling properties should in most cases for Team Speed, make this additive preferable. Motors can of course, run too cool, as they can also run overhot. In my opinion, after a Team Speed run, the motor should be at a temperature that when "primed", the fuel should "crackle", but not immediately evaporate or "smoke". Addition of methonal should cool the motor whilst benzol will create more heat. LACK OF OIL will also cause motor to overheat. When "tailoring" fuel with extra additives always keep the oil content in mind.
(a) To cool a motor add methonal, and/or oil.
(b) To increase operating temperature add benzol.
(c) If motor appears to burn too dry, oil can be delayed from burning by adding distilled water.

The other variable to the above is, of course, the additional Nitro content to be added to achieve "cackle free" smooth running.

The new Airspeed No. 9 already has a high Nitrothane content, and the "tailoring" necessary with fuel should be achieved with water and benzol, both of which should increase laps when added. "Blast" could also be used to an advantage in some motors.

There is little doubt that top speed performance in National contests now requires special fuels, and at present no "home brews" are equalling the commercially available "Airspeed", which can now be improved still further with "Blast".

Of interest to modellers is the fact that all of the Team Speed successes mentioned in these notes were achieved with Enya motors which appear to react so favourably to the "hot brews" needed in today's team race motors.

Nothing so far has been said regarding the smaller classes of team racing where the diesel engines appear at this stage, to hold top performances. Diesel fuels appear more simple than glo, owing to the fewer suitable ingredients used, but without doubt, the quantities used are very critical for optimum performance.
"Airspeed" No. 6 has proven to be equal to most of the better special diesel fuels made up by top modellers in diesel team speed. However, as with glo fuels, a good deal oi improvement is possible by individual "tailoring". Airspeed diesel
fuels, No. 2, 4 and 6, have a progressively higher Nitrate content, and the desired amount for any particular motor can be obtained by inter-mixing of these numbers and/or the adding of power kerosene, aviation kero or lighting kerosene. The first two have higher compression ignition temperatures than the lighting kerosene, also they have a higher calorific value which theoretically means more laps.

The addition of any form of nitrate or nitrite causes a compression build-up as the motor warms. This is minimized by the particular Nitrate used in "Airspeed" fuels but cannot be eliminated, and must be controlled by the addition of ether or kerosene. If the compression build-up is too great, kero should be added, if too little or not apparent at all, add ether or more nitrate.

STUNT FUELS - Little thought has been given to special fuels for stunt flying until recently. The modern stunt model is usually operated with a motor/tank arrangement to give a four stroke operation in level flight and to break into a power two stroke in manoeuvres. Considerable experimenting has been done to achieve a fuel which will allow a stunt motor to operate effectively under these conditions. The plug must not cool off during the slow speed portion of flight, yet the motor must two stroke effectively and immediately the power is needed. "Airspeed" No. l has proven ideal for this type of operation, and this year every major stunt contest in Victoria has been won using "Airspeed" No. 1. (I would like to acknowledge the assistance given by the distributors of Merco Motors, which were used to power the winning models in all these major stunt contests.)

HOME BREWS - For those of you who for economic reasons, or just like to brew fuels, try mixing a can of "Airspeed" Na3, No. 5 or No. 9 in your home brew glofuel, or a can of No. 6 in your diesel fuel and check the difference.

GENERAL - Fuels can be a particularly interesting part of model engine operation, and as so many full variants are available from your local hobby store, start mixing and get more fun and results from your model flying. Bill buans.

## *-SAFARI

THE NEW COLOUR CODID MICRO-SANDED WOOD. ISPICIALLY SELECTED FROM the highest grade balsa from icquador avallable in all sizes, SHEETS, BLOCKS, STRIPS, ETC.

from head, and in its place two or three normal aluminium gaskets should be used. Shorter head screws are available from your Fox dealer if standard head screws are too long.

The wide acceptance of Fox motors in Australia is gratifying to both the distributors and manufacturer, as well as providing users of Fox motors with a top performance.

The little 15X certainly hides its light "under a bushel'; the outside appearance may not be impressive to the average modeller. but the answer is the unbelievably low price .- 99/6d. .- and the high potential performance. All of the value goes INSIDE the motor. No time, which means money, is wasted polishing the outside, cleaning off the castings, or fitting pretty, but useless coloured heads, etc. All of the price of this amazing 15X goes into the performance.

John Morgan, leading Sydney speed flyer, has achieved some terrific results, with the $99 / 6 \mathrm{~d}$. Fox 15X and the special 15xx. John tells us that the latest Fox 15 he has is the fastest 15 he has ever handled.

Len Buck, another of Australia's top speed flyers, has also been impressed with the potential of the new Fox 15. Len has reworked both the 15 X and XX , and on accurate tachometer readings is bettering almost all of the known top speed specials

Andrew Kimonides, Victoria's mostactive speed flyer, has followed the lead of John and Len and has a Fox 15 which he has given the "treatment", and on his first test flight recorded well over the "ton" -( $100 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. ).

The Fox 15 motors were in operation at the 62/63 Nationals, and succeeded in beating all comers in their speed class. F. A. L. speed was won with Fox 15 flown by Clive Wheatley.

The Fox 15X, by the way, also won the speed event at the U.S. Nats this year. Yes, the $99 / 6 d$. motor can be reworked to outperform motors three times its price

Remember, although the Fox 15X is capable of satisying the top speed boys throughout the world, it is the lowest priced $2.5 \mathrm{c} . \mathrm{c}$. motor available, and is designed for many uses. The 15 X comes fitted with a compression ring, which lowers the compression ratio for easier "running in" and sport flying or radio work, but for higher performance this ring should be removed

DON'T disregard the Fox 15X because of the low price. Play with it a little and you have the highest performer in its class at the lowest price----Three for the price of one----

FROM WHAT WE HEAR the new Fox 35X has been the biggest surprise of the year to Australian modellers who know. A needle roller race 35 at the retail price of £7.19.6. This new motor is virtually the Fox Combat Special at half the price. Porting is modified for more simple nonpressure operation, but of course can be modified for pressure if desired.

We confidently expect the Fox 35 X to be powering more Class 111 Team racers, stunt models and combat ships than all other makes combined in the very near future. Modellers tell us nothing can match the value and performance of the Fox 35X. Don't let the price fool you on this one either. Although only recently placed on general distribution in Australia, Fox 35 motors predominated in the later rounds of this year's Nationals Combat event.
U. S. Manufacturers lost a good deal of the World motor market to foreign makes, but if Fox did not better their efforts, he must forsake his title of the "World's leading model engine manufacturer.' This is a title Fox has earned and intends to keep

The little Fox. 049 is another surprise. Peter Chinn, in Model Airplane News and Model Aircraft rated this motor on tost at $.096 \mathrm{H} . \mathrm{P}_{\mathrm{L}}$, almost double that of another popular low priced. 049. The Fox .049 comes fitted with tank and fueline, and retails in Australia at 59/6d.

A slightly bigger brother is the Fox 10 l. $8 \mathrm{c} . \mathrm{c}$. Ideal for the smaller controline models, especially designed for the beginner. The swing is to glo motors for the beginner, as they are less liable to structural fallure than the small diesels which so often are wrecked by beginners "winding on the com". Small glo motors are easy to operate these days and more beginners are realizing this fact. John Morgan's Fox set New Australian Proto Speed Record at Camden Nationals


If you're looking for flying fun . . . it's yours in a jiffy with any one of these 5 K \& B U-control flying model kits. The parts practically fall into place, they are so easy to assemble - all you need is a screw driver! Each is an authentic reproduction of its counterpart.

Complete with our own K \& B Tornado engine (it starts instantly with a flip of the prop), thesersizzling speedsters "eat up the air'!! Dive, climb, or stunt-they do it all better than all other U-control planes. See them today at your dealer, in their big, beautiful, full color, cello-wrapped packages.

They're rarin' to go ... so why wait?

## DENIGHT

SPECIAL

BRITISH SE-5A


AT YOUR FAVORITE HOBBY DEPOT

## PROVE

Quality and Performance are no accident


ENYA 15 D. II. Top F. A. I. performance! Fitted with massive ball race. . Equal to the World's best in 2.5 competition diesels.

"FACTS"! ENYA 29, results $\overline{\text { in Official }}$ M. A. A. A. Team Race events last season:61/2 NATIONALS, 1st, 2nd, 4th, \& Advertiser Trophy lst . . . . .... VIC W/D CHAMPS, lst, 2nd, \& NEW Australian Record......... VIC INTERSTATE T/SRACE, lst, also NEW Australian Record . . . .

# - What other engine can show a record like this? 

ENYA Glo:-. 049,. 06,.09,. 15, $.19, .29, .35, .45, .60$
ENYA Diesel:- . 06 (lc.c) .15 (2.5cc)
All of these motors are available with $R / C$ Throttle valves . . . .

> "DID YOL SEE THE STUNT PERFOR MANCE OF THE NEW "ENYA $45^{" \prime}$ IN KEN TAYLOR 'S "SHARK" AT THE NATIONALS? POWER PLUS WITH CONSISTENT HIGH/LOW R. P. M. TRANSITION • $~ \cdot ~ \cdot ~ . ~ . ~ . ~ . ~$

# ENYA <br> R/C 

Saburo Enya is concentrating on 35 and 45 TV types (Throttle Valve) and employs an ingenious double needle valve control as seen in the photograph One is the main full power setting valve and the other


TO WIN-READ WORLD
FAMOUS YEAR BOOKSII Champlons do. Why don't YOU 1959-61-288 pages, 250 plans, 1957-58-224 pages, 164 pians, 1955-56-192 pages, 135 plans,. 1953 - 128 pages, 116 plans,'
NOTE: Year Book specialty is Free Flight, from R/C to Gliders. Order today-One or All! P.P. for idling. At moderate engine speeds, fuel flow is regulated by the tapered groove machined on the throttle valve surface, giving a rich mixture according to the airflow in the venturi. As the throttle closes so the main jet is blanked off and the idling jet takes over. Each ncedle has remote fuel feed, so the unit is bulky; but obviously both clever in inception and reliable in operation.

## MOUNT (Actual size)



PARTS LIST OF ENYA SPECIAL THROTTLE VALVE

| Part No. | Description of Part | Part No. | Description of Part |
| :---: | :---: | :---: | :---: |
| 4531 | Throttle Valve Assembly | $31 F 5$ | Spring Setting Nut |
| (35-1I) | Throttle Valve Body | $31 G$ 31 H | Throttle Valve Body Setting Screw |
| 318 | Throttle Valve | 311 | Idling Speed Adjusting Screw |
| 31 C | Throttle Valve Controlling Lever | 31 J | Idling Mixture Adjusting Needle |
| 31 E | laling Fuel Feed Pipe |  | Valve Assembly |
| 31 F | Main Needle Valve Assem. | $31 \mathrm{31J} 1$ | Needle Valve |
| 31 F 1 | Main Needle Valve | 31 J 3 | Seede Value Setting Spring |
| $31 F 2$ | Main Spray Bar | 31 J 4 | Spray Bar Locking Nut |
| 31 F 3 | Main Needle Valve Setting Spring Main Spray Bar Lockirig Nut | 31 J 5 | Spring Setting Nut |



R/C FALCON - 56'1 Single to 6
channel ship for .09-. 19 engine.
WITTMAN BUSTER - $40^{\prime \prime}$ Sharp stunt model for . 19-. 35 engino. KIT G14, 24 Ctn., $38^{4}$


LI'L JUMPIN' BEAN - $21^{\prime \prime}$ spon for vorite $1 / 2 A$ sfunt model KIT G8,

48' SPAN, 330 5Q. IN.
Tremendous climb, slow soar ing glide. Handles hotrest engines;simple rugged contest winner,



## smu manu BUSTER <br> The SIMPLFIED new top stunt model!

 Really sharp performance through advaneed, sturdy design. Full-length leading and trailing edges, new construction improvements. Includes pictorial "Leaming How To Stunt," plus "Tips on Winning the AYSC," completerstep-by-step plans, otc.FOR . 19 TO . 35 ENG



H'LSATAN
19" span, $1 / 2$ A combat-stunt fot . 049 engine KIT G12

## SHOESTRING STUNTER

The beautiful TOP STUNT ship that's mode the biggest hit in yoon! Fast, smoolh, turns very tightly, cuts sharp corners. Real quality jam-packed kit worth a full buck more, with faotures as in Bustor obove. See it now.
FOR . 19 TO . 35 ENG.

## HOBBY HELPERS

PROPELLORS: Lack of knowledge of basic propellor design and technology among some of the accepted leading aeromodellers is astounding. Complete ignorance of the reason for true helical pitch, or how to check the accuracy of pitch angles, seems commonplace, whereas the correct method to plot out a particular pitched propellor to carve from a block appears to be virtually unknown.

The following may help these modellers to unravel the "mysteries" of what is actually a comparatively simple application of aerodynamics.

PITCH: This is the angle at which the blades are set, and the figure quoted is the distance the propellor should move forward if "screwed" into a solid. Obviously this angle must vary constantly along the blade if the progress of the blade through the solid is to be at a constant rate along its length, as the speed of the blade increases progressively from hub to tip. Actual pitch angles should be measured from the "mean" cord of the airfoil section used on the blade, the "mean" cord being a line from the centre of the leading edge to the trailing edge. In practice however, the underside of the propellor blade is most generally used as the datum line for pitch meas urements as most propellor airfoils are close to flat bottomed.

SLIP: This is the variation between theoretical pitch, and the actual distance the model travels forward in the air for each revolution of the propellor. The "Slip" factor can vary greatly, and when at its minimum can usually be regarded as the optimum sized propellor. . . . . .

PITCH CHART: A simple and accurate chart can be drawn up quite simply, and used to check pitch angles
at any point along the blade. To cope with propellors up to $12^{\prime \prime}$ diameter, a sheet of paper approximately $40^{\prime \prime} \times 12^{11}$ is required.

First draw a line along the bottom $40^{\prime \prime}$ length of the sheet, and then a vertical at right angles on the $12^{\prime \prime}$ edge. Convert measurements from $2^{\prime \prime}$ each $\frac{1}{2}$ "to $12^{\prime \prime}$ (diameter of blade stations) into circumferences by multiplying by $3-1 / 7$ th, which will be the distance travelled by each point $\frac{1^{\prime \prime}}{2}$ apart along the blade in one revolution. These lengths must then be marked off along the $40^{\prime \prime}$ base line. Now up the $12^{\text {" vertical line mark in the range of }}$ pitches required - $4^{\prime \prime}, 5^{\prime \prime}, 6^{\prime \prime}, 7^{\prime \prime}, 8^{\prime \prime}$, $9^{\prime \prime}, 10^{\prime \prime}$, etc. , measured up from the base line. Next each of the points on the vertical line are connected to the points on the base line, using if possible different coloured lines fromeach pitch measurement so as to prevent confusion if several pitches are used on the one chart.

THE ACTUAL ANGLE resulting where the line from the pitch measurement cuts the base line is the pitch angle at the respective blade station.

TO CHECK any propellor accurately, mark off each blade every $\frac{1}{2}$ " after the first 1 " each side of the dead centre of prop.

CUT templates according to chart of the pitch angles required for each blade station from light card or metal, marking each one clearly as to its blade station and pitch. Mount propellor on a dead flat surface, and slide the check plates under each blade at its respective station. A quick check will show if the pitch angle matches the template or not. REMEMBER only changes in the "mean" cord angle can effect pitch, the mean cord generally for our purposes being the underside of blade. Bill buens.

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N.S.W.: JONES $G$ JOSEPM PTY. LTO. 32 ROSEHMLSTREET

ATTENTION HOBBY DEALERS


## FOX 15x WORLD'S MOST TESTED MOTOR



Bore .590, Stroke .540, Disp. .15, Wi. $40 z$.

Now that FOX are available iu Australian modellers at competitive prices, these motors are fast repeating their American success in Australia... The FOX 15X, the lowest priced contest motor in its class, can be modified for all uses from R/C to Speed flying. . . The FOX 35X proved its versatility too, for STUNT, COMBAT, and TEAM SPEED. . . If you saw them at the 62 / 3 NATIONAL CHAMPIONSHIPS you know this to be true... FOX also set the Aust. PROTO SPEED record.


## Radio Roundabout

Conducted by
John Marquette 45 Pymble Ave.,
Pym!le, N.S.W.

At the Nationals just concluded there were 236 contestants and we made over 750 entries in these events. This was an all time high and this contest was the largest ever held. One would reasonably expect on the basis of the above figures that Radio like the other events would have been a record. Well, it almost was. but in reverse. Intermediate had the lowest entries ever and is short-lived as an official event. The multi was not much better... Rubber on the other hand was quite well patronised and this was the saving factor, otherwise the whole section would have been a very large flop. It's difficult to understand why the entry was so low especially when you consider the tremendous wave of popularity radio flying is enjoying at the moment. The Victorlans particularly were conspicuous by their absence, there being only one of their lads who contested multi. This was obviously the reason why the multi event was so poor, for there is no question that collectlvely they are the most proficent State in the art of multi flying. Queensland also falled to make an appearance in multi events althought this State was really interested in rubber.

Running through the events in order of sequence we have mult first. This was flown on the 31st of December. There were 12 entrants and when the time to start was due only 5 faced the judges. The result was a foregone conclusion, rather than a prang or a motor cut, it had to be Tom Prosser, of N.S.W. It was. Tom flew a real copybook pattern with a score of 2.576 points was not overmarked. He flew his veteran Gee String which has a half constructed Chinchilla radio gear, duramite servos and a $K$, and $B .45$. This win would probably entitle him to enter a team in the R.T. Inter Nats at Brussels this year, and if he were fortunate enough to make this trip there is no question he would make his presence felt. It would let the rest of the world know that Australia, too, has top line radio men. Basil Healey who placed second has his feet on the rungs of the ladder too. Although he has a good cliff in front of him before he catches Tom or some of the other top boys, he is well on the way. There is no question he will get there. The score of 2,514 which was a very good effort and the result of a good pattern. Considering Basil only took up multi flying 6 months ago his progress is quite spectacular, and if he continues to gain proficlency at the rate he has he will most certalnly give the big boys a run for it at the next Nats. The "Pegasus" was Basil's cholce of model. R. \& P. 8, duramites, and a K. \& B. . 45 . The rest of the field were only there to make up the number. The third place was flown by an own-designed "Grish" as yet unmade and powered by a Veco 35 , sllvertone relay was 10 geared and transmite servos. A magnificent 1.510 points were the reward for this placing. Fourth was Richard Shaw, of N.S.W., with his 72 inch "Stencil $S$." This machine futtered through the pattern with Wag 2TPW radio gear and an O.S. 35 up front. Bad luck put Ian Watts of Victoria out of the running for a beter position. Ian is a very good and experlenced multi flyer. He has
been at the game longer than most of us. I can remember viewing over his " Sm g Hog' with a 6 channel B.B. in 1958 Nats. which with the exception of my old T.P.T.W. Wave Guide was the only multi at this contest. On this occasion at the conclusion of his first flight whilst making his approach for landing he experienced radio failure. This resulted in an assault on the tarmac which put him out of the second round, and cost him at least third place. Wally, with a gaily patriotic red and white Gee String, with O.S. 10 channel and K. \& B. .45, Rudder or with single function was with us on the 2nd of January.

Here we had 33 entrants of which 21 were starters. Tom Prosser also won this event, but this time not so decisively. A relatively new club in N.S.W. known as Cumberland R.C.M.C. is producing its share of experts, and among the top of these are the two Winley boys, Lyall and Nev. All three flew beautiful patterns as the scores will indicate. Tom made 2,867 polnts flying his "Penetrater" with home built radio and Sabre .19. Lyall was second with a "Graupner" Electra, Silvertone radio gear and an O.S. .15. His score was 2,442 , while Nev. with 2,313 flew his own design semi scale "Mustang", controlled by silvertone and powered by an O.S. .15. Actually this was a very good event all round, there being many excellent patterns flown. A few who come to mind are Kev. Heeley, N.S.W., fiying a "Houdini" Silvertone and Glo Chlef .19. This is the youngest R.C. man we know. I think he is 14 . As we have reported before he sure makes the clder guys get up on their toes. Then there was Roger Duance of South Australia, with an O.B. model, O.S.5a and Enya .15. Basll Healey. N.S.W. "Cicada" Silvertone Glo Chief. 19. Noel Faull, Victoria, with his Junior Storm"r "Graupner" O.S. 15. Ron Hughes, N.S.W.. "Houdini" Silvertone, Enya .19. This is the model that would have won the appearance award if there had been one. Also Keith Follet, Victoria, with "Sportster" Silvertone and O.S. 15, and from Queensland Ron Tayles with a "Houdinl" Silvertone and O.S. 15.

On the last day January 4th, the greatest flop of the whole show was staged. Intermediate. It is a plty that this event has died, especially as it took a couple of years battling to have it included on the Nationals Calendar. There is a way in which we can reinstate Intermediate. however, but more of this later. Let's keep on the subject of the Nats. There must be at least 14 intermediate models in the country for this is how many entries were recelved, but when the showdown came there only turned out to be four. which to say the least is pretty bad. The standard of the flying of the four was very good and It's a pity a few more didn't have a go for it could have been a very interesting event. The Winleys again took honours here, Lyall placing first and Nev. third. In between was that well-known intermediate expert of Victoria, Noel Fell. Unfortunately, I wasn't able to get detalls of the models used. but I think Lyall and Nev. both flew "Houdinl's" with Silvertone and dual varicomps, while Noel used a "viking" with an O.S. and his own scheme of switching a "Graupner" unlmatic on rudder and burlimatic on elevator. The scores were Lyall Winley, 3,298, Noel Fell 2,823 points, and Nev. Winley with 2,178 points. The Hallstrom refrigerator, which was so generously donated by Mr. Edward Hallstrom to be awarded to the radio champion of champions went to Tom Prosser as the highest point scorer over the three events.

RULES: Now that the Nats are behind us for another year this seems to be a good time to think about the rules and decide whether or not we are happy to live with them as they stand at the moment. On the strength of this last performance there seems to be a peed for some alteration. The next M.A.A.A. Rules Conference is due to be held at the 17 th Nats so why don't we start thinking about it now, so that we can be ready to send our delegares to this conference with instructions to put forward these very necessary improvements. Whether you agree with the suggestions or opinions of this column or not is not the main point. What you surely must agree with is that at least one event, the Intermediate. is most definitely in need of an overhaul. This was proved at Camden. These are the proposals we suggest would make a good workable calendar. We would very much appreciate your views on the matter, and any suggestions you may have.

SINGLE FUNCTION, or let's come down to earth and call it, rudder only, for after all that's really what it is. The present rules state that only one function can be performed by radio. What else can this be but rudder. I've yet to meet modeller who can put a model through the pattern on throttle or elevator only. Maybe it would be possible with allerons only, but this is not very practical. It is of course reallsed that the moment we fiddle with the single function rules it ceases to be an F.A.I. event. In this case I can't see we have anything to lose. It is not flown in world competition and it's hard to understand why we should slavishly follow the F.A.L. rules on an event that is most unsuitable to our conditions and temperament. Especially when the F.A.I. don't fly the event themselves. Rudder only should be the beginners' event, to encourage new blood into contest flying, and also to cater for the modeller who has not a great deal of money to spend cn equipment. As things stand now any radio gear may be used in this event as indeed it is. In this country and others where the F.A.I. rules are used. the winners are nearly always the experts who can afford to use multi channel equipment in their models. This leaves the single channel escapement fler with very ilttle chance of success. Why not make rudder only an event where rudder control is obligatory with throttle optional and als', for those who would like it with wheel brakes and steerable undercarriage ontional too, and the most important part, limit the radio gear to single channel only. As far as the flight pattern is concerned why not introduce some manoeuvres. Although the present pattern appears quite simple at first glance. It really isn't suitable if we are to make this. the beginners' event, for to execute it perfectiy takes quit a lot of practice, judgement and experlence, which beginners have not yet acquired or they would not be beginners. Intermediate, as we have said, certainly needs looking into too. As it stands now there are virtually only two systems which can be used both of which are not popular. These are pulse and cascaded escapements. I realize $I$ am on thin ice when $I$ start In discussing pulse, and I can easily buy an argument. However. at the risk of this. I will press on. Galloping Ghosts, Kicking Ducks and what have you, are all systems that require a good measure of skill in the bullding and flying and the lact that there is no commercial equipment avallable here for these systems means the modeller must make his own. This requires a fair radio knowledge which most modellers do not possess. In other words pulse is rather difficult and only appeals to a few. This was borne out at the Iast American Nationals where the entry for Intermedate was only 9. Cascaded escapements do not reaulre much skll but are limited in their applicstion and not really sultable. Our suggestion is to remove the restrictions from the radlo gear and place them on the controls. If we Ilmited Intermediate to models with rudder.
elevator and throttle with steerable undercarriage and brakes as optional and fly the multi pattern we would then have a good event and one which would probably be more popular than full multi. Multi should be left alone. This event is the only one flown in world competition and to maintain a basis of comparison we should adhere strictly to the F.A.I. rules.

THE R. B. WALLIS TRANSISTOR RECEIVER


This recelver was first flown in May, 1961, and has been used with success in many models since, including pulse operation up to 20 p.p.s. It is not intended for the beglnner nor anyone with a scant knowledge of radio, but it is felt that the serious experimenter might find it of interest. For this reason some of the details of construction have been left to the bullder, particularly the holes in the P.C. board. This was done because of the difficulty in duplicating sub miniature parts. As Bob puts it. "Anyone who is capable of constructing this receiver should be able to work out where the holes go. Due to the difference to performance in various parts some modifications may be found necessary for satisfactory operation. These are set out as follows:

The 47K Resistor negative to base of PR2 via secondary off S.2. 11 may be reduced as far down as 15K. Then a . 002 Capacitor is necessary across the batteries. This increases sensitivity but it is very sensitive to mechanical noises. In some cases depending on O.C. 170 it may be necessary to vary the 10 PF collector to omltter OC 170 between 5 and 10 PF . Performance on 2.5 volts ( $2 \times 225$ DEACS). Idle 1.2 to 1.6 MA carrler on 1 to 1.2 Ma tone on with 300 ohm relay. At transmitter 10 MA at $6 / 10 \mathrm{th}$ of a mile 8 M. Relay, and O.S. Minl relay is used with bobbin rewound with 40 enamelled wire. This glves about 250 to 300 ohms depending on how tightly it is wound set to pull in at 4 to 5 MA. Coll for 27 megacycles, wind 10 turns with 26 B. and S. wire on quarter inch sloped fromer. For 40 megacycle operation wind 6 turns 26 BMS wire on one quarter inch sloped former. Rl adjust for an optlmum range usually 3 to



4 K but could be much higher, depends on OC 170. RFC 15-36 microhenrl, 25 microhenri used. Transformers ST11, 20K to 1 K impedence. TR30's are O.K. Ariel about 24 inches. not critical. Resisters: 3 K resistors may be preferred, 3 K . Electrolitics 2 MFD in RF stage MFD may be $1-2.5$ no larger. 3.2 MFD may be up to 6.4. 10 MFD emitter PR3. minimum value but maybe larger. 10 MFD TR4 is minimum. 100 MFD relay armature to normal open contact only necessary if same batteries are used for receiver and escapement. Otherwise usual .01 supressor is used.

## BEAUTIZONE MODEL DISPLAY

During the anniversary weekend Coffs Harbour, in conjunction with the local Lions Club, put on a novel contest, novel in as much as it was the first time to our knowledge that model boats and aircraft have shared the same competition. Sunday was the boat day, which was held in a beautiful setting at Park Beach. A large crowd of local people and visitors witnessed a very interesting display. The outstanding boat of the contest was Bob Gawne's American Scout Frelghter which won the static display. It is in fact a working model, but due to trouble with the ballast shifting, attempts to sall it had to be abandoned. Built from a Sterling Kit it is 55 inches long and an accurate scale model. It took over a year to bulld. This can be understood when one examines the mass of detail that has gone into it. It is a beautifully finished boat and it's a credit to its owner. Power is from a water cooled E.D. 3.46 Hunter. The radio gear is Wright. single channel, driving a clockwork E.D. Escapement on rudder. Wally Gill and Kit Hacking of Coffs Harbour put on a frisky display with their 36 inch "Marlins." Both boats are identlcal and each is powered with water-cooled 2.5 cc Taipan, and Wal's has an E.D. 2.46 which give them a good turn of speed. The radio gear in Kit's is a home built Hills, while Wally uses a Silvertone. Wally was the winner in the R.C. section.

The flylng day on Monday was very close to being scrubbed. Arrangements had been made to use the aerodrome but at the last minute these arrangements were cancelled. A wild panic survey of the district uncovered a large field four miles north of town which was owned by a sympathetic gentleman who gave permission for us to use it. The day was very hot and humid with a 25 knot wind, so it is understandable that entries were a bit low. However those who flew got in a falr amount of alr time. Results were:

Multi: Basil Healey, "Pegasus" B.45. REP 8, lst; John Marquette own design Silvertone Custom 10 Veco 35 , 2nd. There was no third place.

Rudder Only: Basil Healey, "Blitzen" Silvertone O.S.i5, 1st; John Marquette, "Blitzen" Silvertone O.S.15, 2nd; Greg For rester O.D. Model O.S. 4A, Taipan 2.5. 3rd.

## ROCKHAMPTON NEWS <br> (By Peter Hartley)

In the last year radio has become increasingly popular at Rockhampton and at present we have six members of the Rockhampton Model Aero Club very keen. One of the best efforts put forward so far was by Col Acheson. He put thirty flights up without any trouble when starting off in the radio branch of fiying, but on his 30th flight he lost control of his model and he hasn't sighted it since. Incldentally it is now thought that when Col replaced his battery pack for a new one, he put an old one in by mistake. He was using Sllvertone single channel gear in his own designed plane. Now Col is thinking of making his own receiver so it won't be long before he is in the aif again.

Another very conscientious radio flyer is Dr. L. Georgeson who concentrates only on radio. Just lately he has been using O.S. slagle and 10 channel gear in one of his own designs and a Smog Hog respectively. On one of his first flights of his Smog Hog he did some good handling as it was coming down rather fast and as the ground was coming last he pulled the plane out and made not a bad landing. All we are waiting for now is for him to fiy his new Orion-just imagine it dolng barrel-rolls parallel to the ground at about six feet.

A well known aeromodeller, Terry Phillpson, has a Gasser equipped with O.S. single channel gear and powered by an Allen Mercury 1.5 diesel, but has not un to now been flown as time seems scare for Terry as he devotes it to the club. Other active radio flyers are Trevor and Peter Hartley, who are using silvertone and O.S. single channel gear respectively. Trevor built a Frog Jackdaw, but decided it was tco expensive to learn on, so he has now bullt a Gasser powered by 1.5 Frog diesel. He has not suffered any serlous prangs yet. Peter, at present is flying an Aeroflyte Invader pow ered by a Max 11115 multi-speed Glo. At first too much rudder movement proved deadly and thus a new fuselage had to be made after a spectacular prang from a splral from about 200 feet. Brian Harris has brought some Wright gear, but up to now he has not bullt a plane for it-so Brian, I hope we can urge vou along a little and have you flying before long.

Just at present control-line fiylng at Rockhampton is a little dead since there is no fleld to use, but a new field has been started on, so it shouldn't be long before the club is back in full swing again.


## trade notes

Throughout the world over recent years, rapid developments in the design of radio gear, have made it much easier for modellers to select reliable light weight equlpment. Each year has usually shown that one particular type, has taken top honours, and at present, all transistor relayless equipment, has cleaned up in the World Champlonships, and the American Nationals.

Following along this trend, the o.S. Company has released this year, no fewer than twelve completely new transmitters, receivers and escapements. These include two miniature single channel receivers with transmitters - a six channel transistor transmitter and receiver-three ten channel receivers with a matching transmitter, and three new miniature rubber drlven escapements.

The transmitters are all transistor hand held types, operating off 12 volts. Eight size C torch batteries cllp into bullt in compartments to provide this voltage. Each transmitter is crystal controlled and has a centre loaded aerial coll with built in meter for positive tuning. Printed circults eliminate wiring, and in the case of the 10 channel transmitter, being similar to Orbit, the five toggle switches go stralght through the case and are soldered direct on to the fibre glass printed circuit board. Identification of these transmitters is made by TX-II Single Channel, TX-6 Six Channel and TX-10 Ten Channel. The latter, operates all three new O.S. Ten Channel Receivers.

Working off only 3 volts, both the 5AR and $5 A L$ single channel recelvers, are new all transistor circults in miniature nylon type potted cases. The 5AL, however, is a relayless unit, for those interested in this method of operation. Also continued this year is the proven $4 \mathrm{~A}-\mathrm{II}$ valve transistor recelver, in its miniature gold case. This receiver is the heavier of the three, but welghs only 1.8 ozs .

For Six channel flying, the TX-6 Transmitter operates the slx volt all transistor RB-6 miniature relay receiver, which weighs 6 ozs. Both these units are selling at really competitive low prices.

Perhaps the most unusual feature of the new O.S. Radio Gear, has been the production of no less than three Ten Channel Receivers.

Even more startling is the retail price of RBL-10 at £28. This 10 channel all transistor relayless receiver weighs only 33 y ozs., and is mounted in the usual strong o.s. anodised gold case. To introduce multi flying, the idea with this receiver, is for a beginner to purchase one Transmite type servo. to commence with, and set off learning and flying left and right rudder. As he progresses more servos may be purchased. without the noticable drain on the pocket.

For enthusiasts with Duramite servos. a compact all transistor relay recelver, RB-10. has been released for ten channel operation.

This too is many pounds lower in price than earlier series similar multi recelvers.

The top end of the O.S. Radio Range this year, is covered by a magnificent 10 Channel All Transistor Superhet Relayless Recelver weighing just over 4 ozs.. and measuring $11 / 4 \mathrm{in} \times 2 \mathrm{in}$. $x \operatorname{in}$. This crystal controlled recelver, is matched in split frequencles with the TX-10 Transmitter. so that up to five aircraft can be flown on the 27 mer band.

In Victoria, Bob Hyde, Barry Angus and Tony Farnan, are already using this gear in new lightwelght multi models. Apart from other enthusiasts. W.A. champ. Dous Murray. is also eagerly awaiting the arrival of his set, and he is promising even more spectacular flying with his new Gee String

Gorrie's report keen interest from club fllers in O.S. silencers. O.S. pressure nipples. O.S. 19 R/C motors, io $\times 5$ and 6 wooden props for $1 / 6$ each. Multi speed attachments.

## Pablo

## (By Bill Cook. N.Z.)

PABLO: A small R/C model that should provide hours of fun. All measurements are given so you should have no trouble in drawing the plans. For 1.5 cc motors make the model 50 per cent. blgger and for 2.5 cc to 3.5 cc double the slze. Let's hear how you like it and don't forget a picture.


K-11


S-2 ...... 35/-


S-4 ......36/6


SILVERTONE CUSTOM MULTI ILEVIEW (By Basil Healy)

During the 16th Nationals at Camden, the Editor (Russ Hammond) asked me if I would install one of the first Silvertone Custom Multis in his model. This was quite a pleasure as it gave me a chance to obtain some experience on a relayless rig at somebody else's expense and to get a good insight into the workings of the new equipment. The outfit in question was relayless 10 channel glving rudder, elevator, elevator trim, alleron and motor control.

The transmitter comes in a characterestic silver anodised case measuring 8in x 8in x 3in.. with a substantial three section chrome plated telescopic antenna. It is hand held and weighs 61b. when fully loaded with batteries. This is the first hand held transmitter I have seen which has a reasonable power consumption, and thus is completely portable, since it does not require an external supply of larger batterles to obtain reasonable economy. Low tension drain is only $220 \mathrm{~m} . a .$, and high tension a mere 7 m.a. on low power, and 12 m.a. on high power. But-on low power the two high tension batteries are connected in parallel and the drain is onlv $3.5 \mathrm{~m} . \mathrm{a}$. each, which is less than most recelvers draw Battery life should not be a problem with this transmitter. as all operations are carried out on low power. the switch being finped to the high position only in emergencles.

The transmitter uses a 3 A5 valve as R.F. oscillator and power amplifier and 2 OC74 transistors as tone generators with anadditional OC74 as a mixer. In the tone generating circult 2 High "Q" toroids are used to obtain maximum stability.

All components are assembled on a fibre glass printed circult board which should provide maximum resistance to damage due to mishanding.

The outfits are available to operate on 27 and 40 megacycle with simultaneous or non simultaneous oneration. Also of note is the fact that they may be obtained in any number of channels from two to ten and that anybody purchasing a 2 or 4 channel outfit can have it converted, by the makers, up to any combination of channels to 10 at a later date.

The receiver comes in a one plece silver anodised aluminium case for the relayless version and a two plece case for the relay ver-

sion. Dimensions are: 2in. x $23 / 4 \mathrm{in}$. $x 13$ ín. for the relayless model and 2 in. $x 23$ in. $x$ $2 \%$ in for the relas version. Both models are built on fibre glass printed circuit board, the relayless version being a single deck construction and the relay a two deck construction with all the relays on the upper deck.

Featured in the receiver is an XFY34 valve in the 27 megacycle version and a 1AG4 valve in the 40 megacycle version with 3 OC74 transistors in the amplifier stages. A Medco 10 channel reed bank is used in the final stage on all models. In the relay version which I viewed O.S. relays were used.

Simultaneous operation of 2 reeds at once was very good and for protection against burnt out transistors in Bonner Transmites controls are arranged to operate off alternate reeds: e.g., Rudder from No. 1 and No. 3, Alleron from No. 2 and No. 4. etc.

Relayless receivers are supplied with all leads brought out from the case, there being no necessity to carry out soldering on to the reed banks. Batteries required to operate the receiver are one 1.5 volt low tension battery. and one 30 volt high tension battery. Power: consumption is as follows: Low tension 30 m.a. High tension-relayless version 2 m.a.; relay version $2 \mathrm{~m} . \mathrm{a}$. carrier, $5.5 \mathrm{~m} . a$. one tone. $9.0 \mathrm{~m} . \mathrm{a}$. two tones.

Summing up-a sound, reliable and extremely well bullt outfit made in Australia and employing a circuit ideally suited to Australian conditions. Belng locally made means service and repair facilties are avallable promptly from the manufacturers. This is a very important point. Very competitively priced when compared with imported products.

Manufactured and distributed by Advance Radio Control, 45 Pymble Avenue, Pymble. N.S.W.

## GADGETS

No. 1: If you wish to fit a fillet to your undercart legs which will not damage the fuselage or split under stress of landing try using an ordinary eraser (rubber) at the top where the leg joins wing or fuselage or at the lower end where it joins the pants (wheel spats).
No. 2: Ever tried cutting straight with knife and rule? Difficult isn't it? Well try this. Take some contact cement and apply it to the back of your steel rule or straight edge and to the back of some sandpaper or emery of suitable grade and size and affix the two. You'll find your rule will no more wander from the straight and narrow.
No. 3: For the scale modeller fitting a model rotary engine and wondering how he can make the engine rotate, try this. When you have made up your engine, cut the centre from the crank case and form a perfectly round hole. Now make up a block to fit this but with $1 / 16$ th of an inch to $1 / 8$ th of an inch clearance. Then cement a strip of velvet (colour to taste) with fibres outermost, to the male block. Now flange one side and slide dummy engine over and flange other side. You'll find that once engine is mounted in model and power unit is started your rotary will rotate in the direction the velvet fibres are leaning.
silvertone custom multi review (By Basil Healy) Edituring the 16th Nationals at Camden, the


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GADGETS
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# CLUB NOTES 



Mrs. E. G. Beilby. The carrier deck delta is 26" span with O.S. Max 29 and O/D 3 line system and haust slide throttle as shown in October, 60 Model News. "Manx Katt" is a 30" tailer type sport/combat model with O.S. Max-1 .29 power.

## SOUTH GIPPSLAND ASSOCIATED aEROMODELLERS

(From E. G. Beilby)
Most of us down here in the "deep south" are elther dairy farmers or closely connected with dairying, and our busy season is during spring and early summer. So modelling activity tends to die out about AugustSeptember due to lack of time and energy. and we usually don't get back into gear till well into the New Year.

Latest trend here is towards large R/C motor for $\mathrm{C} / \mathrm{L}$. Allan Bengitson is running in an O.S. 49 R/C for his 3 line All Australian and Bob Block is walting on a Merco $49 \mathrm{R} / \mathrm{C}$ for his blg scale Martin Baker MB-5, with Roberts Filght Control.

Both these models at present stagger around with O.S. Max $29 \mathrm{M} / \mathrm{S}$ motors. Rully Ruck plans to fit a Glo-Chief 45 in his blg twin boom stunter and Johnny Westerway, at present bullding $=$ couple of Noblers. thinks an Enya 60 powered 6 ft. stunter on 100-120 feet lines should really slay 'em !

Our Christmas party (a bucks affair) is slated for the 14th or 21st of December (not finalised yet). After some movies. slldes and a liberal amount of Christmas cheer. we hope to have some night flying. (Anyone for combat ?) We also plan to hold an annual Easter picnic for the wives and families.

## NOTES FROM THE MACQUARIE M.F.C.

(By A. Ronke)
The Macquarie M.F.C. held its first public open contest on Monday. January 28. The contest was a Magazine Class Scale controlline, and it went over quite well with only about 2 months notice. There were 10 entrants with first place golng to Barre Coe. of R.A.A.F., Richmond M.F.C., with 98 points. Second place to Barry Bowerman of Earlwood.

## PLANS

For every type of model, C/L, F/F, R/C and Scale.
Write for complete lists to
M.N. PLAN SERVICE 3 GRANDVIEW DRIVE,
CAMPBELLTOWN, N.S.W.

With 97 pe.l.to, and third place going to Bill Robson of Eastern Districts M.F.C., with 96 points. A very close event. The aircraft were in order of placings: A Vought Corsaire (Barclay kit), Globe Swift (Aeromodeller plans service, Mosquito (Aeromodeller plans service).

This event proved to be quite popular with contestants and the other modellers on the field. Only three falled to quallfy. All others were good flyers, naturally enough as all came from plans services of various magazines.

This contest is the first of its kind held in this country and, as can be gathered from above notes, is uot a super scale or mantel model contest and is designed to pave the way for the sports scale bulider and the novice younger aeromodeller who may think that he wouldn't be able to compete in the type of scale event at the Nats. I am sending along a copy of the rules for vou to publish if you would.

The plans for this type of model are available from any magazine which has published construction drawings of flying scale model alrcraft, not a scale 3 view, shcwing full size measurements. The event is contested for the KLG perpetual trophy and will be held annually in the Campbelltown area. A small replica of the KLG trophy accompanies first place. We shall be holding a similar event for F.F. later in the year, which shall be open to all aeromodellers, possibly in June.

If you are interested in this type of contest sead an S.A.E. for a copy of the rules to A. Ronke, 51 Alman Street, Campbelltown. N.S.W.

1: L. Franklin of Parramatta-Granville Club starting up his fine model of a Mosquito in Macquarie's Clubs 1st. Magazine Class Scale Contest at Campbelitown 2: Sgt. Jack Prince and Dakota of R.A.A.F., Richmond. Stalled on take off in magazine class scale event at Campbelltown, N.S.W.
3: Jim Densham of Bankstown, N.S.W. trying desperately, but in vain to start up his fine Turbulent in Magazine Scale at Campbelltown, N.S.W.
4: Second place-getter, Barry Bowerman, of Earlwood, starting up his Globe Swift in the Magazine Class Scale at Campbelltown, N.S.W.
5 : L.A.C. Rod OHara's fine model of Sopwith $1_{2}^{13}$ Strutter, placed fourth in Magazine Scale. Hails from Queensland and R.A.A.F. Richmond.

6: Line up of scale models at the start of the first magazine Class Scale Champs. Run by Macquarie MF.C. at Campbelltown, N.S.W., on Australia Day.
7: Pte. Lloyd of Ingleburn, N.S.W., about to start his Graupner T/A 152 in Magazine Scale at Campbelltown.
8 : The victorious three : Globe Swifts. from $L$. to $R: B$. Bowerman, 2nd., 97 pts.; B. Coe 1st., Corsair, 98 pts; Bill Robson, Mosquito, 3rd, 96 pts.
(All pictures by Bert Ronke of Campbell town, N.S.W.


BANKSTWON M.F.C.-OPEN COMP 25/11/62
A six-event programme was attended $\mathrm{b}_{3}$ some 40 to 50 modellers who enjoyed a fine days flying despite a stiffish breeze.

The outstanding highlights of the day were: Garry Lynch defeating Paul Turner for the Stunt; and in the seml-final of the Combat "losing" his model which landed 150ft. on top of a tree, requiring the efforts of four mountaineers to rescue it.

Reggle Towell at last winning a Combat Trophy much to everyone's pleasure. Young Jimmie Densham scoring the only Bankstown win of the day by taking the $20 \mathrm{~min}-$ ute Rat Race with 275 laps; a 27 lap win from the second modeller.

## RESULTS

1st front: Open $1 / 2$ A T/R: 1st. J. McKellow E.D.M.F.C.C.; 2nd: Broughton and Kerr, E.D.M.F.C.C.

2nd Event: B Class T/R: ast, J. McKellow, E.D.M.F.C.C.; 2nd, $\dot{H}$. Wilkinson. Epping.

3rd Event: F.A.I.. T/R, Ist, M. Stokes. E.D.M.F.C.C.

4th Event: Open Stunt, 1st, G. Lynch, E.D.M.F.C.C.: 2nd, P. Turner, Ryde; 3rd, R. Towell, Doonslde. Best Junior: G. Lynch, E.D.M.F.C.C.

5th Event : Open Combat, 1st, R. Towell Doonside; 2nd, G. Lynch. E.D.M.F.C.C.; 3rd. R. Ralph, Greenacre

6 th Event: Rat Race, 1st, J. Densham. Bankstown.

This was Bankstown's first "Open Competition Day" and as one competitor was overheard to say on the way home ". . . very nice of Bankstown to put on a special benefit day for Eastern Districts."

## PARRAMATTA-GRANVILLE THIRD ANNUAL FREE FLIGHT CHAMPIONSHIPS 1962

In previous years P.G.F.C. has held its contest in wet conditions. This year it was held off until 2nd December, and we in Sydney experienced some rather unusual hot weather. The temperature was in the 90's and the air was dead, the drift changed throughout the day, but was mainly from the north-east.

Belng held at Riverstone Meatworks it was expected that many models would be lost. but only one succeeded. This was Mick Macy's Dixielander. which was in perfect trim and had no D.T. It was up for 30 minutes before Mick gave up the chase. One of the big features of the day was the return of Barry Gorman after 4 years from whom we all expected a good show. The inclusion of Radio Control was well met and was running smoothly before the free flight started.

The free flight contest started around 11.00 and the first official max. of the day was recorded by Don Pope with his F.A.I.


Don Pope with his F.A.I. Power, after a prang.


Brian Beashel with his Wake.
model. I launched my A/2 model only to be collected by a large tree after only 72 seconds. This succeeded in stcoping me flying for 20 minutes. Gordon Robb launched his $A / 2$ into a thermal and looked like the danger, but damage to his wing on landing was to seal his fate and he was finally unplaced. Barry Gorman struck a tree in his first flight, this was the beginning of Barry's troubles. He later splralled in from a launch and wrecked his model. Kelth Murry was flying well and won the glider with a Finch-Worm. Keith also placed in the chuck glider and scramble. Reg. Towell placed second in the glider after a flight with no D.T. Arthur Butler was proved once again to be a steady fyer. and won the double in the power and placed second in the open rudder. After a count down Arthur was the Champion of Champions. Brlan Beashal and Dane Hegarthy was also consistant.

Brian won the rubber with a Wakefield design and placed 3rd in open power and chuck glider. Dave won the scramble also the chuck glider, his first flight was a beauty and was timed at 3 mins. 35 sec Dave had two max's in chuck glider and recelved 174.2 out of a pessible 180 secs. Jim Densham from Bankstown flew well in the chuck glider but was unplaced. We hope to see many more younger fiyers turning to free filght.

The heat of the day proved too hot for the rudder, after Dave Hegarty broke a motor, Ivor Stow who was anchor man. clalmed it was the hottest he had felt a broken motor for some tlme. A radio model lost a wing high up and Basil Healey lost a tail possibly due to rudder breaking. All in all the radio seemed successful and was won by L. Winley.

The day was most enjoyable put on up to date and it appears the P.G.F.C. can run a free flight contest second only to the State Champs.

Open Rubber: 1 st. B. Beashel MFFC. $322.4 \mathrm{sec}: \quad 2 \mathrm{nd}$. A Butler, MFFC. 304.5 secs: $3 \mathrm{rd}, \mathrm{D} . \mathrm{Hegrar}^{2}, \mathrm{MFFC}, 251.0 \mathrm{sec}$.

Open Sailplane: lst. K. Murray, MFFC. 327.0 sec; 2nd, R. Towell, Doonbats, 297.9 secs.; 3rd, A. Edwards, PGFC, 278.1 secs.

Ópen Power: 1st, A. Butler, MFFC i2.68:1.; 2nd, B. Allcock, MFFC, $12.60: 1$ : 3rd, B. Beashel, MFFC, $11.9: 1$.
F.A.I. Power : 1st, A. Butler, MFFC 474.0 sec; 2nd, D. Pope, PGFC, 386.8 sec.

Chuck Glider : 1st. D. Hegarty, MFFC. $174.2 \mathrm{sec} . ; 2 \mathrm{nd}$, K. Mur:av. MFFC. 149.7 sec. $3 \mathrm{rd}, \mathrm{B}$. Beaschel, MFFC. 124.9 secs.

Scramble: 1st, D. Hegarty. MFFC. 498 sec.; 2nd, K. Murray, MFFC. 382.0 sec.: 3rd. G. Barker, PGFC, 165.1 sec.

Single Function Radio: Ist. L. Winlev. CRCMC, 1,637 pts; 2nd, A. J. Heeley, CRMC, 1,370 pts.; 3rd, R. Ewers, CRMC, 1.324 pts.

Champlon of Champions: A. Butler.

## CLUB NOTES

(By A. Gorrie)
At a field day at Burlelgh about 10 keen R/C flers met. Jack Richters, Bill McKee. Bruce Jensen and Lionel Perrin made 78 flights with 7 models. Models flown were Junior 60's, Invader. Jackdaw and Electra. Jack Richters lost i radio, two weeks later another. Both turned up after 3 weeks in pouring rain. He set to and fixed both up after paying reward. Had to put less glue in the repair. Nearly broke from paying rewards. but both receivers were in good nick with the exception of plane. But, seeing his bedroom and lounge walls are filled up with wrecks and pieces, he soon patched them up after he patched up the lumps on his head which his wife gave him because she had to move out to the chook house to make room for the Improved Electra he nearly has fintshed. After all tha.t Bill McKee and Bruce Jensen have an improved Electra. thonel Perrin with 2 junior 60's improved and Jack Richters with Matador and two Electras went to Burlelgh with two newcomers into the field. One small Volkswagen carried an Invader, nice and new for a newcomer. It went stralght up for half a mile and came straight down in pieces. Not a good plane for a first flght, and very disappointing for a beginner. To make matters worse Jack flew it up but it jammed on signal at the ton of fight. Jack Richters feels bad about it, but hopes he isn't too disappolnted and will try again. Bill McKee had his super 60 there with motor control and did some good fiying for the first time after 10 years hollday from the game. After all this happened Jack Bruce and Lionel and Bill went on to clock up 78 fights with 7 models for the one day and there were some good landings. All, with the exception of 5 fights were on the spot. The transmitter had to be moved by Jack and Bruce In a hurry quite a few times otherwise they would not have had one. Bill McKee finished his Jackdaw nice and neat, but like Mortein

6 months to bulld and 10 seconds to flatten it. Bad luck. Bill!

## CLUB NOTES FROM BENDIGO

(By John Power)
Just a few more notes for your "Club News" columns. As press correspondent to the Bendigo Model Aero Club, it is my solemn duty to advise all members of the aeromodelling world of the untimely accidental death of one of our most esteemed members who was a driving force in the club just a few years ago. before he left Bendigo to go to Melbourne to higher levels in the slgnwriting world. To Junior Thomas Allen we all din our wings in solemn tribute to our departed clubmate. Junior was killed when his car left the road and hit a tree while driving home to Ferntree Gully in November of last year. Farewell Junlor.

And now to move on to a more pleasant report. The Bendigo Model Aero Club held a "fly by night" on December 23rd, 1962. A stinking hot day when flying was to commence at 2.30 p.m. However, only a few arrived at this hour. being very hardy fellows from Rochester Club. Bendigo bods arrived at 4 p.m., when conditions cooled off a little by a change in the weather. Bv 7 p.m. It had cooled off by a good 20 degrees. Flying was off to a good start with combat. radio. freeflight and towline gliders, with a Jetex 50 job tossed in. Intermittent light being a nuisance more than anything else. Most of the bods brought a picnic lunch along and the club provided cold drinks for everyone and caused a grounding of models while the scramble for a whistlewetter was on. As darkness anmroached everyone check their wrecks for night fying. Those flying with light made a very impressive spectacle.

We had about 2 hours of night flying mostly by the combat boys and was really
good to watch. All flew with the aid of a spot light of unknown and unowned source. Still it was a great help. Flying with 2 in the circle with streamers and spotlight and pitch darkness all around is a tricky business. and If you got more than 2 attempts at cutting you were very lucky indeed. Prangs were the order of the night. I know, I had one. The worst part of prang at night is the emu bob by torch light afterwards looking for the bits to salvage. I know! By 9.30 p.m., it had really flown itself out by the lack of models and the cold snap. Everyone was happy to go home.

The first week of December was very notable for the B.M.A.C. as we had our first speed attempt for some years. Challengers were Peter Gallagher and yours truly. Peter flew a battered F.A.I. T/R model with Eta 15.D. Was reported to do $86 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. Peter was, however, an unlucky bos. he made one fight to try it out anव clocked $72 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. but did not make it official. Then on the second try, which was official he did about 5 or 6 laps when suddenly the $T / R$ disintegrated in mici air. Just goes to show you what can happen in this game. Some make every try official. Yours truly was next to tow the line with an upiled speed bomb powered by a Webra $2.5 R$ to F.A.I. standard. First try gave me a soeed of $70.8 \mathrm{~m} . \mathrm{p} . \mathrm{h}-$ not high enough. The old record stood for years at $68 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. for the lack of triers. On the second try the K.K. plastic spinner flew to bits and the model rattled and vibrated like a thrashing machine for most of the filght, then it settled down for a go, only to do 5 laps before it konked out. On examining the bomb I discovered that the motor was only held by two bolts on one side. Had lock nuts on too, which Just goes to show you how some donks work. Hear a little gossip that peter is flat out bullding a coeed bomb, so I had beter watch out or I will lose my cup. By the time this note hits the press the speed record should be a lot higher. one way or the other.

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## VICTORIAN RACING NOTES

(By David Kidd)
Well let's face it, after the mediocre performance given by Victorian speed and teamrace enthusiasts at the Camden Nats.. it is encouraging to see the first competitions for 1963 prcducing such keen interest and good results. The speed boys have already held an F.A.I. class I concest, which resulted in a tie between A. Kimonides and RiceHoltham at 115.3 m.p.h. Believe me, this is really moving.

The Manion-Munro Eace saw an Australlan record shattered, as the team of $A$. Holtham, A. Kimonldes, and myself turned in 7 min . 14 sec . to win the second heat. Lawson and Fryer won the first heat with quick pit stons and high lappage from their smooth running Enya model. Whilst the Cincotta-Wllson-James team recorded their best time yet, by doing 7 min . 53 sec . It was a dellgit to hear the smooth, screaming motor-runs of these top teanss. In direct contrast to the harsh, erratic runs of 1962. Nobody was to be disappointed in hoping for the best final seen here for a long time.

From the word go the fast O.S. powered models of Cincotta \& Co., and Holtham \& Co.. raced for the lead. and in spite of several incidents the situation was unchanged within 5 laps of home, at which stage cincotta led by 3 laps, with Holtham slowly naking up ground, having had an unexpected pit stop earlier in the race. The tension was terrific, when, in sight of victory, Cincotta's motor ran out of steam with only 2 laps to go, which let the Holtham-KiddKimonides team go through to score their second consecutlve win at 7 min. 59 secs. Even so, Cincotta. Wilson and James were only 8 sec. behind, and Fryer-Lawson were consistent at 8 min . 18 sec. The fourth finalists, Tidey and Hobba, were unable to comblete the distance because of loose cylinder head bolts, but thelr model had showed its potential earlier.

Many newcomers to team racing belleve that the experts use fancy fuel formulae to score thelr wins, so to explode that myth once and for all, here is what the winner used : One bottle of Keogh's Racing Glow. to which was added 28 c.c. of methanol and 28 c.c. of benzol (try your BP station). This can be done safely without lowering the oll content below 20 per cent, and should glve 50 laps if the rest of the combination is anywhere near right.

On the same day the Syd. Beeton trophy race of Class 3 models was flown off. and this time the Cincotta-Wilson-James team bettered their Nats winning time to win at 8 min. 19 sec . Plelfer and Hughes were second using an O.S. silencer on their Kyowa 45. The silencer reduced the noise to that of a small diesel and gave 10 more laps, but speed had to suffer somewhat. Proves it can be done

Trevor Woolnough did a good job as contest director, and mowed the grass at Moorabbin Aerodrome untll its surface was definitely better than the one we are used to at Albert Park. It seems that the change of venue will be for the good. Another good feature was the presentation of prlzes to minor placegetters; they were really well deserved this time!

## Newcastle District Aero Modellers

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## CLUB NOTES FROM FAR WESTERN DISTRICT ASSOCIATION AEROMODELLERS

## (By Tensix)

Flying has dropped off slightly in the Far West of Victoria over the past couple of months due mainly to the hot weather and most of the younger members being on holidays and therefore away from the bullding board.

Only a very few members were fortunate enough to make it to the Nats at Camden. but these managed to hold up the honours with a win in Junior Class 1'2 A Team Race by the Stretch-Poiderman team. It is hoped that next year a lot more of the bods will be able to make the journey to the Nats and I have been informed that some clubs are already starting to make preliminary arrangements, so we look like being represented in force.

From Gienelg M.A.C. we hear of another of their madcap models but this time it actually worked. This model (?) was designed and built by Alby Johns, with. no doubt, some helpful (????) comments from hls team mate Les Ball, and is a C/L job using a pusher prop with the donk fitted into the rear of the model. It looks like a mosquito (complete with sting) in reverse. but the main thing is that it flies although some difficulties were encountered with the takeoff, but the bods will soon be able to iron out tins small defect.

CLUB NOTES FROM N.M.A.A.
Gilbert Simpkins fiying a Fairy Deltaceptor with 2.5 O.S. Glow and O.S. 5A Receiver ducted fan operating with Sllvertone Transmitter weighing 23 ozs. Batteries 412 sets of 3 V ) all up weight of batterles 11, ozs. Flew about 300 yards successfully before it collided with a vehicle.

Motor is started with the aid of electric motor with belt.

The model climbed away almost verticall:.
Gilbert intends to build an MIG 15 as soon as possible.

Jack Richter has had 333 fights with his Electra which eventually piled up. Jack considering "suing" the designer for misrepresentation as he claims he was led to belleve the model would have been a good. reliable, stable and durable model. A modeller shouldn't have to bulld a new model every 333 filghts. Take no offence. Mr. Smeed. No one would be held in higher rerard in Australia for good, solid. simple. stable, reilable model designs than vic. Sneed.

## NEWCASTLE MODEL AERO CLUB

Newcastle Model Flying Club held its annual general meeting in July and the following Officers were elected: President. A. Jensen; secretary, A. Ardron; treasurer, A. Willams; vice-president, L. Folbigg; assistant secretary, N. Hunter; committee, R. Rees. F. Weeks, J. Partland. D. Sheldon.

Control Line Flying Field situated at Broadmeadow, behind the Bowling Alley. hours between 2 p.m. and 6 p.m. every Sunday afternoon has been the scene for much activity during the last six months. We have approximately 60 odd members in the club. and during a normal flying day it is very hard to get a flight in any one of our four flying circles.

During the month of September we held our Annual Mattara Festival Model Aeroplane Champlonshlps which turned out to be a huge success. We were very fortunate to have such a glorious day. although the heat played havoc with quite a few team racers. especially in the half $A$ class.

This event was won by the very hard working team of J. Partland and I Roach. of N.M.A.C. Second was P. Corner of E.D.M.F.C. Third was I Howard of E.D.M.F.C.

The F.A.I. event which attracted a large number of entrles from Sydney and other
surrounding clubs was won by R. Rees and I. Roach. Second was A. Kerr of E.D.M.F.C. Third was P. Valleja of N.M.A.C.

The B Class Team Race was won by J. Partland and I Rcach. Second was K. Millard of E.D.M.F.C. Third was A Kerr of E.D.M.F.C.

The motor of the B Class Team Racer flown by J. Partiand was very well prepared by our President-Mr. A. Jensen.

The Stunt was un to the usual National Standard and was won by P. Turner of Ryde M.A.C. Second was $R$ Towel of Doonside. Third was C. Crago of Coonamble Club. A trophy was also presented to $G$. Lynch of E.D.M.F.C. for the best Junior in Open Stunt.

The Combat, as usual was very spectacuIar, $R$. Ferguson eventually runalng out the winner with $A$. Kerr second and $R$. Towell third.

A lot of repairs were needed to models and motors. The OS 35 motors of $A$. Wlllams and $R$. Gilmour of the Newcastle Club had to be separated with a crow bar. Have never seen anything like it before.

Last but by no means least, we had the Rat Race. You don't have to be one to enter, but it sure helps. I saw a chap wandering around with a pair of the biggest wire cutters ever seen. Found out durIng this Rat Race what they were used for. This event attracted a large number of entries which was won by R. Lloyd of E.D.M. F.C. Second was R. Ferguson of E.D.M.F.C. and third was A. Williams of N.M.A.C.

During all of this feverish activity a very prominent club member, B. Ether, had to shelve his models as he was taken down with a very common complaint and could not take part. (Bad luck. Brian).

I was assured by all contestants who partlcipated, especialiy those bods from Sydney and Cessnock Clubs that it was well worth the trip to Newcastle.

We would also like to congratulate the Organisers of the 16 th Nationals at Camden. The members who attended, voted the meeting a great success. They were very pleased at the decision to remove the drum from the centre of the circle in both Half $A$ and B Class Team Races. It proved to be much safer. especially in Half $A$, as an anticlpation of faster speeds is likely in the near future. Certain ciub members are bullding new style team racers, which will be an improvement on conventiongl models. If successful, we predict raised eyebrows and expect to cause a flutter in the processing department at the next contest. Our Club members had quite a winning time at Camden. John Partland won the Half A Team Race. B. Eather the P.A.I. with A. Jensen third in F.A.I. whilst the $B$ Class and Advertiser Trophy went to J . Partland again.

The motors of J. Partland in F.A.I. and $B$ Class were owned and prepared by our club president, A. Jensen.

The club is now getting to be quite active in the Free Flight Field. especlally radio control. We are having a free flight dav in conjunction with the Cssnock Club at Poko!bin Alr Strin with a few weeks.
D. Bernard. I have been told has been doing a lot of nying with his Cicada and our gresident. Mr. A. Jensen. I belleve will put on quite a spectacular display at the next free flight outing with his own design radio model.

During the month of November there was a minor upheaval in the club. The wives and families of club members demanded an outlng in which the use or even the mention of model aercnlanes was banned. so the club members decided to hold a picnic. A very enloyable day was had by all at Moonev Beach just south of Newcastle.

Other clubs please note. You must keep the other half happy too.

## 12th INTER CLUB CONTEST

The 12th Inter Club Contest was held at Warrnambool and as usual the weather was in its normal form and it rained all day which made things a little rough (and wet) on the pit crews, and very slippery for the pllots. Attendance was down on the normal run of meetings but we had enough entrants to make up all events and this resulted in a very keen contest for the Casterton Cup which is awarded to the club gainlng the highest aggregate points for the days contest. This was finally won by Border Club who finished the day with a 2 polnt lead over Hampden with Glenelg a long way back in third place. Highlight of the days contest was the win in Stunt by 15 -year-old Geoff Mackereth. Geoff. has only been fiying for about 12 months and has only recently been able to complete his full stunt pattern, but at Warnambool he fiew like a veteran to down such noted fliers as Brendon Stretch. Jack Williams and Noel Egan.

Association chairman. Les 'Ball, had the doubtful honour of being the only stunt contestant to prang when he splattered his "Thunderstreak" over half the flying field.

Another new flier from Border, Mlke Ward. also showed great form to take off the combat trophy for his club. Although badly hampered by the wet conditions which made it very hard to keep the streamer attached to the model, all combat flers put up a very good effort.

Team races were of the normal standard for this area and although Minhamite Club managed to knock a few second off the Class $2 \mathrm{~T} R$ record there was nothing exceptional happering in these events.

Class I Rat Race saw Border take first place only 3 laps in front of the Gleneln model which was slowly gaining but could not make up the ground it lost with $\&$ bad motor run in the early stages of the race.

Class 2 Rat Race was the usual nectic affalr but the field dropped off after a couple of severe prangs and line tancles and Hampden had an easy time completing the distance to win this ovent.

That's the lot from F.W.D.A.A. for this time and lets hope that there is more to report in the next issue.

## Continued from page 7

The colour cover is all very nice. but I think the small size is ridiculous. Get back to the old size, with big print and photos, even if it means returning to cheaper paper. If you do this, and also make some effort to get it out regularly, we might have some hope of finding it on the news stands. You might think $I$ am being sarcastic, but I mean what I say.

Yours truly,
DAVID KIDD.
One of the first comments received was from Arthur Gorrie. He mentions a Toy Retailer magazine to which he subscribes and said he was pleased to see I was following their lead by using Walt Disney characters and such like animals on the colour cover.

The last Nats was the biggest ever and I will leave the description of it to other modellers. The only comment I would like to make comes from David Kidd's letter where he claims the Nats
proved that Team Racing was bigger than Radio, nothing could be further from the truth. What David fails to realise is that the normal $R$ C modeller is not competitive minded. whereas team racing is competition only, who nies team racers for fun?

John Marquette of Advance Radio recently commenced publishing a few: stencilled pages called Advance News at 10:- per year. There were 1,200 copies of the 1st issue which was a complete se'lout and subs' have been pouring in ever since. If anyone can do a similar thing in C.L I'll believe then it's more popular than R/C. Another point most people overlook is that competition modellers of all types constitute only about 5 per cent. of all modellers and about the same percentage of Model News readers.

## From the federal secretary

Would all States please note the following changes to the current rule book which becomes official immeditely:

1. Jetex Page 37-Clause 3.3.4.3 delete "three minutes" add "two minutes."
2. Free Flight Scale, Page 44-Clause 3.7.3.2.: delete " 6 to 1 " add " 12 to 1 ". The same alteration applies to Control Line Scale.
3. Free Flight Scale, Page 4.5. Add new clause 3.7.4.9.5 Bonus Points for Extra Engines. "Each extra engines carries a bonus of 20 points."

Here's a leter $I$ thought should interest a few readers, particularly the indoor modellers.

From: Mr. Carl Fries. 8798 Sturdy Drive.

Crestwood, 26. Missouri, U.S.A.

Just a little bit of history-Crestwood is a suburb of St. Louis, Missouri. I and 36 other free flight builders make up the model club known as the "Kirkwood Thermaleers, Inc." We meet at each others homes monthly for free discussion about the modelling world. Incidentally we do a lot of building as
well as talking, one of our members-Art Frost- will be a member of the U.S.A. Nordic Glider Team this year and will participate in the FAI Internationals to be held in Europe sometime in August of this year. Other members of this club are well known model builders, and several have won championships in their classifications over the years. The well known helicopter champion Parnell Schoenky (Hilier Trophy) is a member of the Thermaleers. We also have a few Indoor builders, in fact will hold our first contest of the season on Friday. Feb. 22. Our ceiling height is only 22 ft . but we have to live with it, we also have a hard time locally in finding suitable flying sites. All of us belong to the Academy of Model Aeronautics (AMA) which is the governing authori.y on Model Planes in this country. The AMA is an affiliate of the National Aeronautic Association and this in turn is a member body of FAI in Europe.

You might consider Indoor Flying under the Academy Rules which divides ceiling heights into three categories and has separate classes for each In this way a contest can be held in almast any building say as low as a 22ft ceiling and a National Record can be established for that height of ceiling. Works out very well and is really the reason for Indoor coming back into prominence in this country. Believe this was set up about 1956. This year Nationals at Chicago, Illinois, attracted well over 200 entries, should any of your people be interested I can get you the names of well known authorities on the subject and will get the right information for

Incidentally, I am a member of NIMAS (National Indoor Model Airplane Society) and we are actively seeking members abroad, the monthly newsletter "Indoor News and Views" is published by Bud Temny, Box 545, Richardson, Texas (U.S.A.), and subscription rate is 2 dollars per year in case anyone is interested. Dues for membership to NIMAS are 3 dollars per year and this includes the price of the monthly pub-lication-it is excellent and the best in this country. We now have 135 members to February, 1963. and the list is growing.

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