

JULY 1959

# AERO MODELLER



**Full  
Nationals  
Report**

**SUPER NEW  
CRUSADER DRAWINGS**

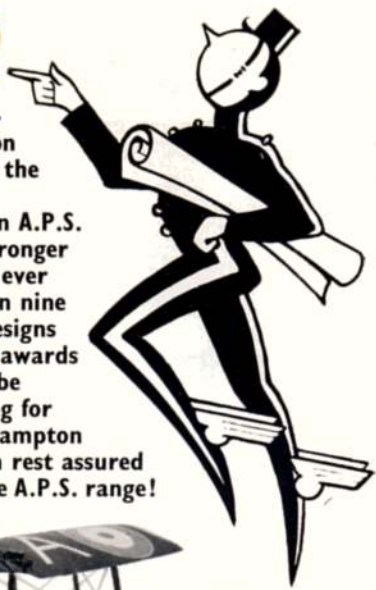
**1/6**

# WINNERS' CHOICE!



1st and 2nd in Multi R/C—the talk of the Nationals—terrific flying by Messrs. Olsen and Uwins.  
RC 710 8/6

ONCE AGAIN aeromodellers intent on winning places at the record Scampton Nationals relied on an A.P.S. PLANS. Against stronger competition than ever before no less than nine different A.P.S. designs received S.M.A.E. awards. As ever, we shall be eagerly negotiating for new stars from Scampton—if it's good then rest assured you'll find it in the A.P.S. range!



## RAZOR-BLADE

Top combat model in 1958, winner of three major events this year including the NATS. (flown by R. Stevens).  
CL 729 3/6



## S. E. 5A

Made by D. Partridge, flew like a true fighter, rivalling duration models to win free-flight scale.  
FSP 682 3/6



## ASTRO-HOG

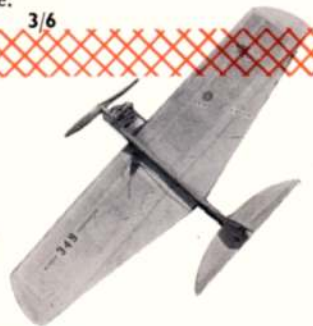
Smooth and fabulous was Frank Van den Bergh's third place in Multi R/C.  
RC 699 15/-



## PEACE-MAKER

## SOPWITH SWALLOW

Beautifully prepared by J. Simmons; placed third in free-flight scale.  
FSP 625 6/6



Semi-finalist in Combat, most common design in the Nats. field, often copied, never bettered.  
CL 6875/-

## DORNIER 215



Placed third in C/L scale for R. Moss, made from super detailed plan.  
CL 627 7/6

## COY LADY

Hits the headlines, see this issue, almost won the Gold Trophy with last flight of the day by R. Brown.  
CL 727 6/-



## SMOG HOG

Won single channel by wide margin (wing shifted 2 in. back) for E. Scoles with Hill Rx (from RC 664, 2/-) design plan.  
RC 659 7/6



## COMING SHORTLY

The NEW A.P.S. PLANS HANDBOOK. In entirely fresh guise, it will be ready soon—160 pages thick at 2/- Watch for release announcement!

# AEROMODELLER PLANS SERVICE






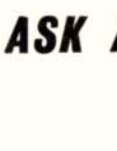


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	1/16" x 3/16" ... ..	1 1/2d.
	1/16" x 1/4" ... ..	2d.
	1/16" x 5/16" ... ..	2 1/2d.
	1/16" x 3/8" ... ..	3d.
	1/16" x 7/16" ... ..	3d.
	1/16" x 1/2" ... ..	3d.
	1/16" x 5/8" ... ..	3 1/2d.
	1/16" x 3/4" ... ..	3 1/2d.
	1/16" x 7/8" ... ..	4d.
	1/16" x 1" ... ..	5d.
	1/16" x 1 1/8" ... ..	6d.
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	1/2" x 3" ... ..	1/-
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	1 1/4" x 3" ... ..	1/8
	1 1/2" x 3" ... ..	10d.
	1 3/4" x 3" ... ..	1/3
	2" x 3" ... ..	1/11
	2 1/4" x 3" ... ..	1/-
	2 1/2" x 3" ... ..	1/6
	2 3/4" x 3" ... ..	2/3
	3" x 3" ... ..	1/1
	3 1/4" x 3" ... ..	1/8
	3 1/2" x 3" ... ..	2/6
	3 3/4" x 3" ... ..	1/4
	4" x 3" ... ..	2/-
	4 1/4" x 3" ... ..	3/-
	4 1/2" x 3" ... ..	1/8
	4 3/4" x 3" ... ..	2/6
	5" x 3" ... ..	3/4

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	1" x 3" ... ..	5/9
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	1 1/2" x 2 1/2" ... ..	5/6
	1 1/2" x 3" ... ..	7/3
	2" x 2" ... ..	5/9
	2" x 2 1/2" ... ..	7/3
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


## MOULDING (Leading Edge)

3 ft. lengths

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	3/8" x 3/8" ... ..	7 1/2d.
	1/2" x 1/2" ... ..	8d.

## MOULDING (Trailing Edge)

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	1/2" x 3/8" ... each	4d.
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	1 1/2" x 1/2" ... ..	7 1/2d.
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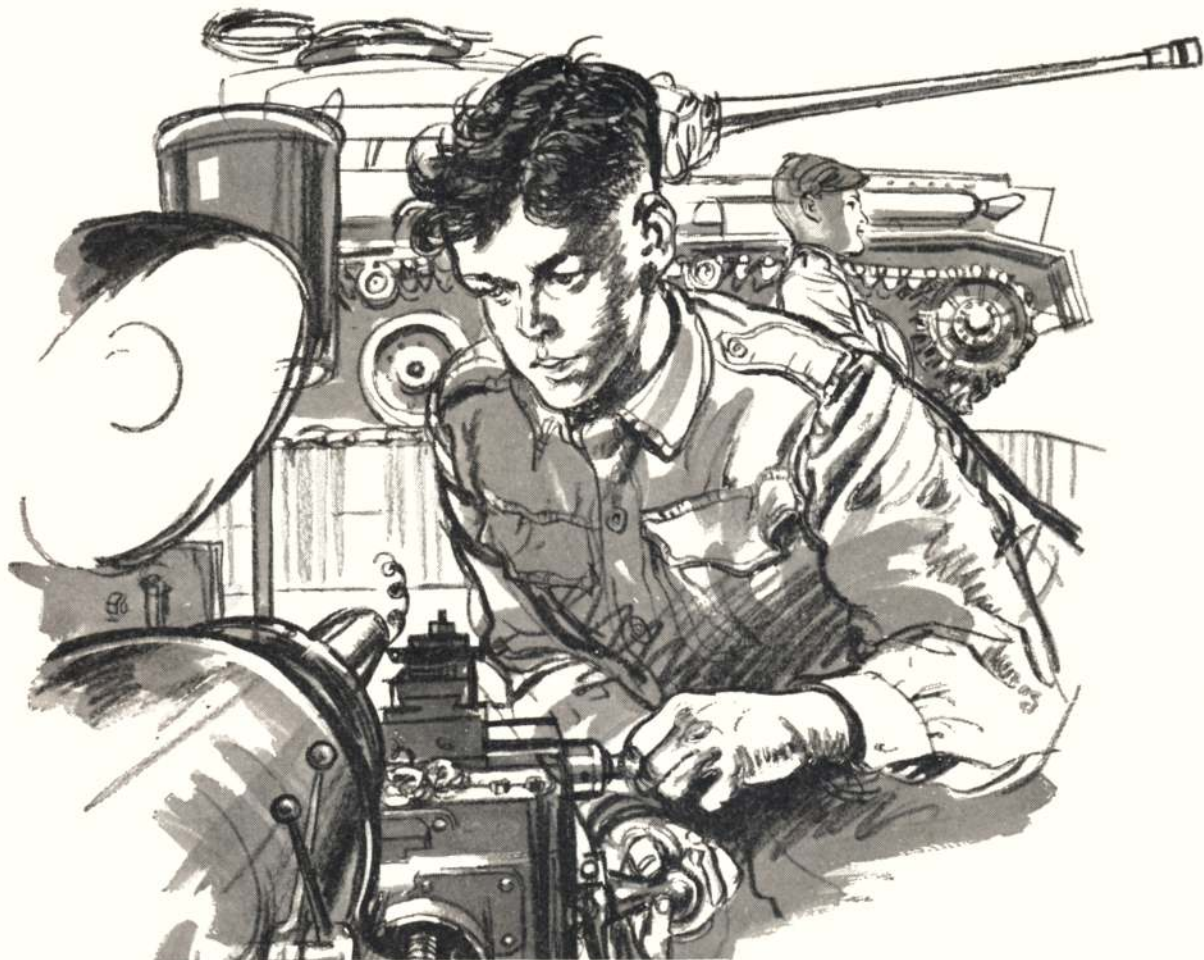
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Total weight .469 grams  
*Weight of New Humbrol alone .090 grams*

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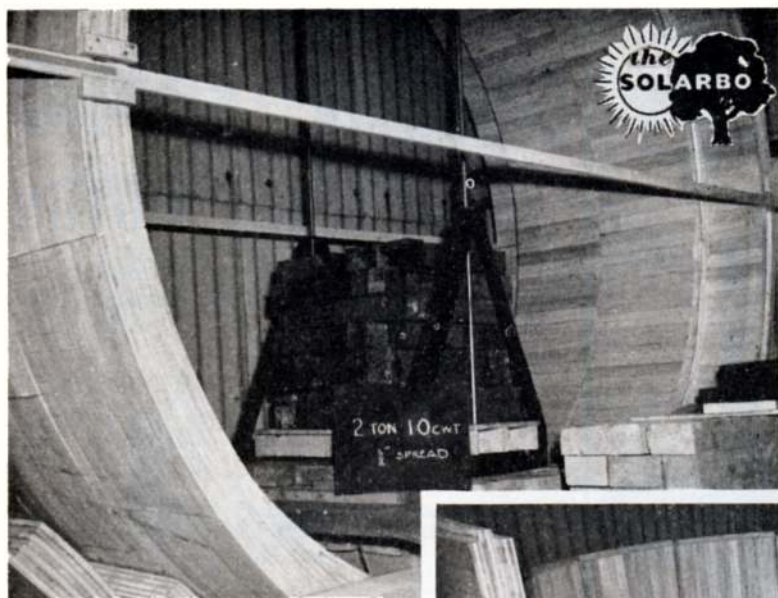


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# BALSA STORY

This is one of a series of articles written by John Paterson, Managing Director of Solarbo Ltd., all about Balsa Wood and its many applications in aeromodelling and other industries.

Photo above shows the rig made for testing the balsa tank-lining segments, the spread being only  $\frac{1}{4}$ -in. with a load of 5,600 lb. applied.



This photograph shows a trial assembly of the segments, arranged with interlocking joints and joints staggered in alternate circumferential rings.

IN THIS ARTICLE I'd like to tell you more about the tank which we lined with balsa wood in the course of the experimental work we did for Shell.

When I was given the job of designing the lining for this tank, I immediately conceived the notion of doing it substantially in the same way as a tunnel is lined—that is by having segments with interlocking joints. The photograph shows a trial assembly of such segments and you will notice that they are arranged so that each alternate circumferential ring has joints staggered with the rings adjacent to it.

If you will look at the other photograph you will see a test ring made for these segments glued together and with a very considerable load hanging from the crown of the ring. The other thing you will see from this photograph is that there are two layers of wood, each layer being six inches thick. The inner six-inch layer was so arranged that the circumferential joints came midway about the section of the outer ring of segments so that there was no through joint either circumferentially or horizontally. You may notice one other thing and that is that the segments themselves are made with cross-laminated balsa wood and you will, I hope, recollect from my previous articles why this was done.

In the top left photograph the ring under test is not supported in any way. The bar across the middle is the measuring device and all the bits of wood at the bottom are merely there to make sure that if the 2 tons 10 cwt. suddenly broke the ring, nobody would be hurt. It would not fall very far. You will notice that with this load, the ring only spreads  $\frac{1}{4}$  in. and that was well within the elastic deformation of the wood. We were not able to load the ring any further because we had not been able to make a really effective glued joint between the inner and outer six-inch layers. When we came to actually line the tank as I will show you later, we were able to get an effective joint here because we had the outer aluminium tank against which we could jack and build up pressures to give an adequate glue joint.

Now the big problem was how to bend the segments out of cross-laminated balsa wood and glue them so that they came out of the jigs truly to shape. You can imagine that if you are going to build a circle of 12 segments, unless these are very accurate indeed, you will not get a circle of true diameter and with tight joints between the segments. Furthermore, you will see that unless the joints were cut very accurately as to angle (that is so that they were radial at each joint) you could not get tight joints and a true circle.



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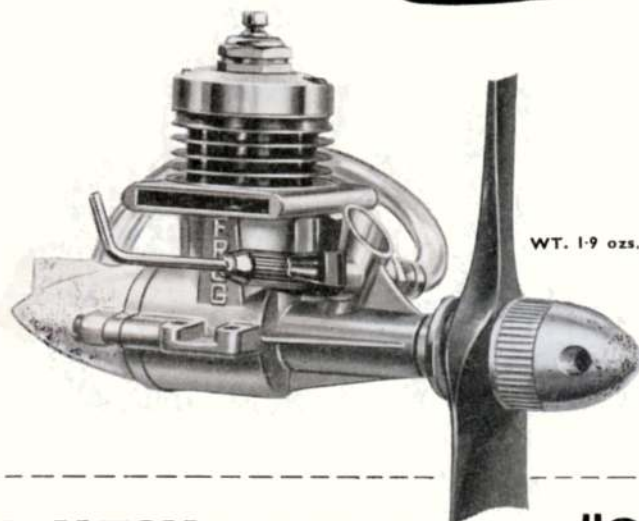
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(Both versions available June/July)



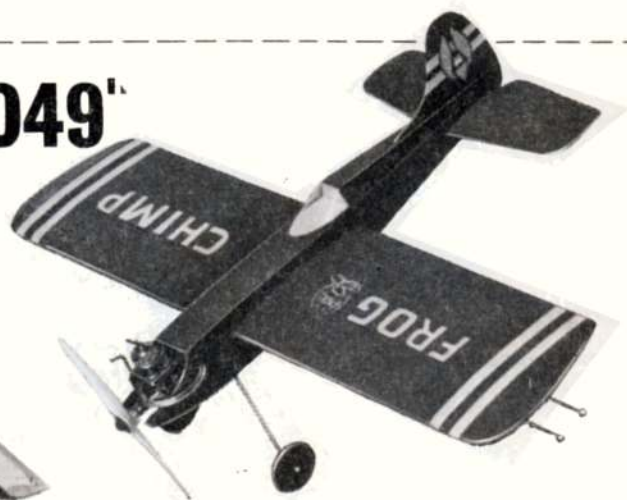
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### Captain Cesare Milani writes:—

"The Taplin Twin installed in my model of the Fokker D.VII had a lot to do with the winning of the Knokke Trophy. It actually started at the first flick (astounding the people around, struggling and sweating with their motors), and developed enough power to overcome the very strong wind and keep the plane steady in the air. Unfortunately, I could not show all the virtues of the motor, throttling down to land, taxi-ing, etc., because the wind was really too strong even to keep the model standing still on the runway. But I hope to perform all that in one of the next rallies."

We are very happy and not a little proud to pay out our £25 prize offer to that well-known scale c/l expert, Cesare Milani, whose Kensington Hotel is the rendezvous of so many visiting aeromodellers on the very first occasion when it could have been won! Bad luck on any other would-be winners, but you can still have the even greater satisfaction of owning and running your own Taplin Twin. Fill in the coupon below for full particulars and reprint of AEROMODELLER Engine Analysis.

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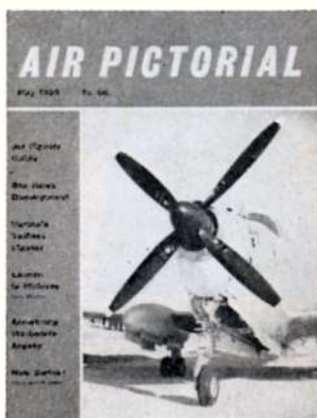
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# "VON RICHTHOFEN AND THE 'FLYING CIRCUS'"

## SOME OPINIONS BY THOSE WHO FOUGHT WITH, AND AGAINST, RICHTHOFEN

**BRITISH**—W/C GERALD C. MAXWELL, M.C., D.F.C., A.F.C., A.E.M.: "I have always longed to know what happened to people like Richthofen and to 'see over the other side of the hill'. This book gives an incredible amount of information, and as I was in 56 Squadron all that time it is of the greatest interest for me." 2nd Lt. H. J. SPARKS (P.O.W., wounded): "I must congratulate all concerned on its detailed accounts. I happen to be the gunner of the machine that the Baron claimed as his 64th, and I must say that the report of the scrap is very exact." Von Richthofen's 80th victim, 2nd Lt. D. G. LEWIS (P.O.W., wounded): "Your account of my fight was correct. What a beautiful publication it is . . . I had completely forgotten the number of the machine in which I was shot down, and am pleased to know what it was . . . Congratulations on the book."

**GERMAN**—Lt. CARL GALETSCHKY (joined *Jasta* 6, 18.8.17, two victories): "I have known Manfred von Richthofen personally and I think that the book is a most remarkable publication; as truthful as possible and to the point." Lt. G. W. GROOS (joined *Jasta* 11, 26.6.17, six victories): "The book has met with my unreserved approval both in regard to its contents and its exemplary presentation. In my opinion the authors have succeeded in giving an unprejudiced absolutely correct and truthful picture of Captain von Richthofen and of the fighter pilots of the first World War." V.f.w. GABRIEL (joined *Jasta* 11, 15.4.18, eleven victories): "I liked all parts of the book very much, and indeed it agrees entirely with the historical facts." Lt. F. LUBBERT (*Jasta* 11): "I have read some important chapters and these correspond to the facts in every way."

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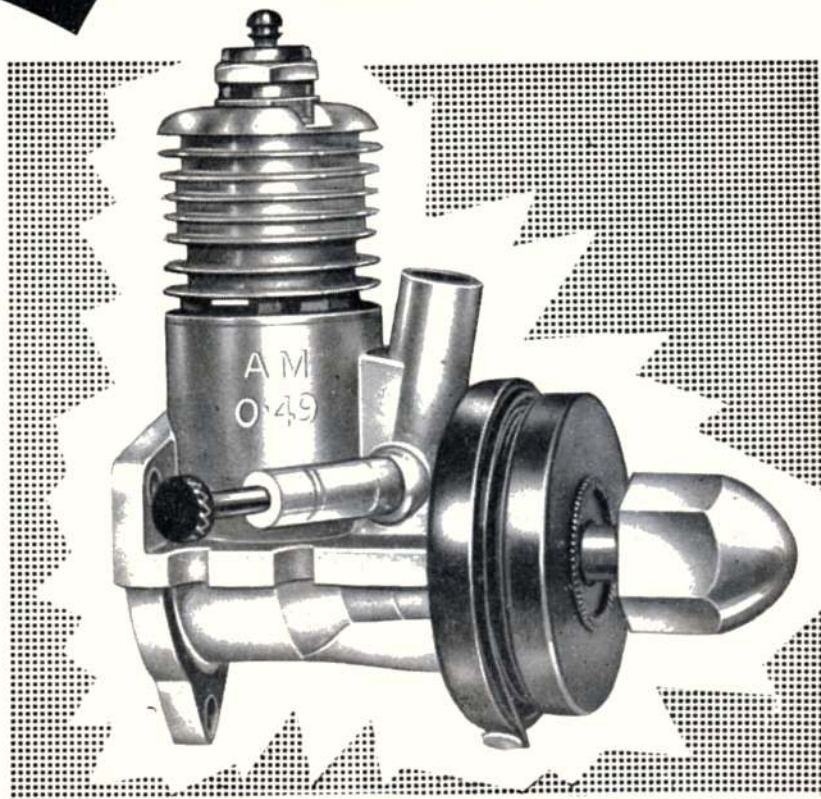
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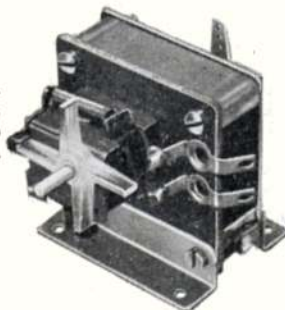
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Working voltage ... 3-6  
Hold-on current 0.35 amp. at 3 V.  
200 movements for full wind.

**41/4**



### SUPER LIGHTWEIGHT RUBBER DRIVEN ESCAPEMENT

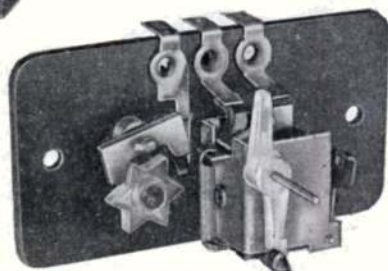
Weight ⅔ oz.  
Size of base 1½ in. diam.  
Working voltage 3-6.  
Hold-on current 0.35 amp.  
at 3 V.

Recommended motor: one  
loop 18 in. long of ⅜ in.  
x 1/24 in. rubber.

### RUBBER DRIVEN COMPOUND ESCAPEMENT

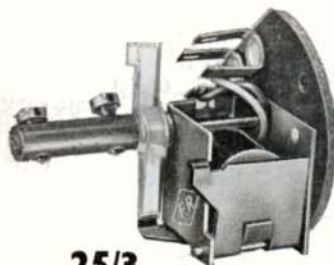
Weight 7/8 oz.  
Size of base 2¼ in. x 1½ in.  
Working voltage 3-6.  
Hold-on current 0.35 amp.  
at 3 V.

Recommended motor: one  
loop 18 in. long of ⅜ in.  
x 1/24 in. rubber.



**49/II**

THIS ESCAPEMENT USED IN CONJUNCTION WITH AN FR CLOCKWORK ESCAPEMENT GIVES SELECTIVE LEFT AND RIGHT RUDDER CONTROL WITH ENGINE CONTROL.

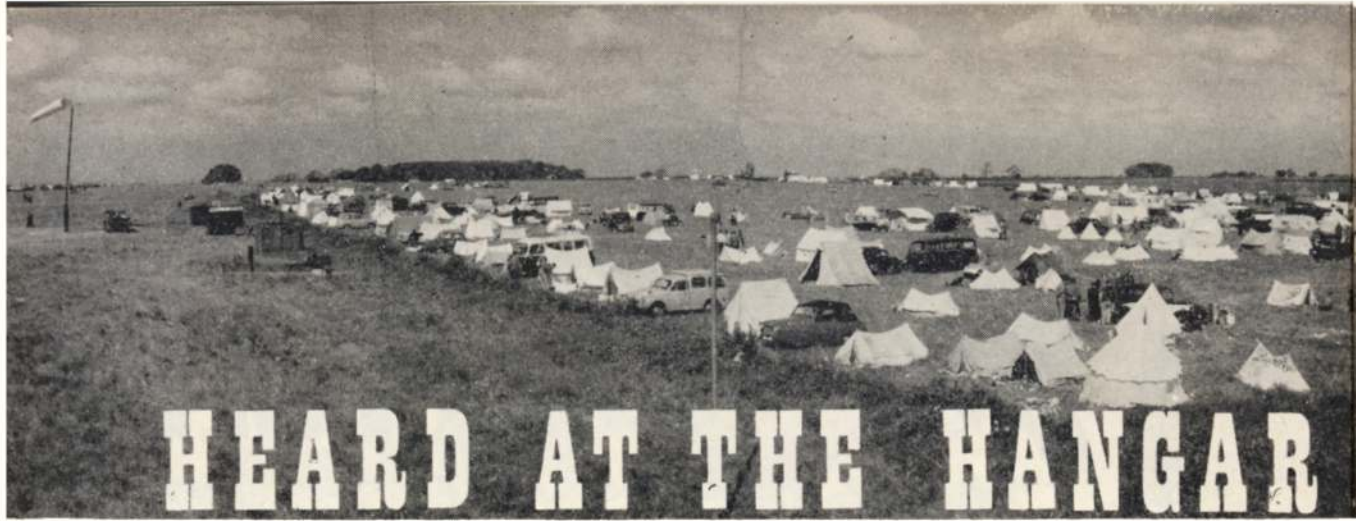


**25/3**

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# HEARD AT THE HANGAR



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*On the Cover:*

*Impressive nose of an F8U-2 Crusader, now entering Squadron service with the U.S. Navy.*

AEROMODELLER incorporates the MODEL AEROPLANE CONSTRUCTOR and is published monthly on the 15th of the previous month by the Proprietors:

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## Whose model?

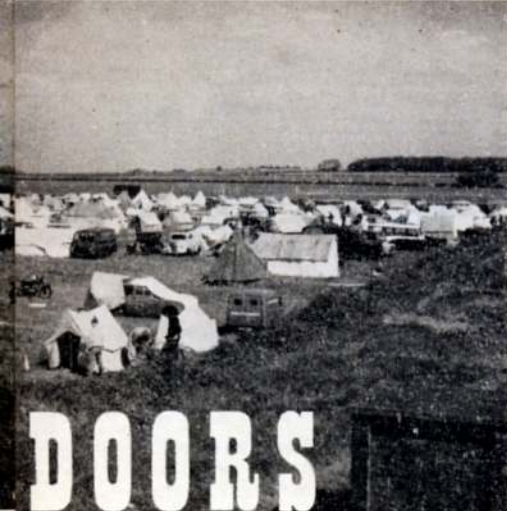
THERE WAS A TIME when one or two of modelling's leading lights earned as much a reputation for having their models built for them as they did for their entertaining characteristics. We accepted their entry into occasional competitions with some measure of resentment, tempered by their goodwill and personality, in fact if any move had been made to exclude their activity through infringement of "own-model" rules, the hobby would have suffered a loss of some magnitude.

Today's equivalent "character" is less valuable to the movement, and far too common for our liking. A rash of paid-help models is appearing in the sport and radio model fields and team racers and combat models are freely entered under names other than that of the builder. A check on S.M.A.E. registration numbers on models, against the entrants own number would have made interesting comparison in some of the control line circles at the Nationals!

This is a hobby for model-making as well as model flying, let's leave out the cheating and see that every aeromodeller obtains success through true personal effort. The merit attached to a contest win with a self-constructed model is the honest modeller's reward for fairplay, and his sense of satisfaction at success is immeasurable.

To stem such degeneration of the hobby in the U.S.A., where the "Builder of the model" rule is open to violation in the use of age groupings, the A.M.A. have issued an explanation of the father/son modelling situation. For the father to assist his junior age group son to make his model is tantamount to teaching the lad to cheat in competitions, and is particularly unfair on the other contestants, when Pop happens to be in the expert grade. There's no objection to father/son teams but the model must be flown in Pop's age group say the A.M.A. Dare we say the same applies to the ladies' class too? By all means encourage the youngsters and the fair sex; but let the guiding hand restrict its movements to instruction, not demonstration, and the pupil will reap the full benefit of our absorbing hobby.





*Panorama of the British Nats. Camp Site, gives one an idea of the enthusiasm for this year's meeting at Scampton*

### Wonderful Nats.

Shortcomings there may have been at Scampton; but not a modeller left the R.A.F. base without a story to tell of fantastic flights or novel experiences to make this Whitsun a most memorable weekend. Our camp panorama gives an idea of the immensity of this year's meeting and if special thanks are to be awarded for making the meeting such a resounding success, then S.M.A.E. Treasurer, Harry Barker, deserves the gratitude of all competitors and spectators. Well done Harry! We should not forget the way in which the Society's Officers and most S.M.A.E. areas helped run the many events on those two crowded days, though once more Combat became the orphan event until Northwood and Kenton friends stepped in to fill the only breach in contest organisation. Few realised that R.A.F. Scampton M.A.C. were responsible for much of the site preparation and worked very hard indeed before the meeting to see that all was ready for the onslaught of 1,320 entries from 168 clubs.

Perhaps the lightest of moments came during S. Midland Area junior champion Rees's night-time flame eating act (Oliver brew too!). We understand that not a few were mystified by his 10-foot jets of fire. Essex farmer George French, winner in power, was "told off" by a diligent fellow modeller for traversing a field he knew to be safe to cross and Chas. Taylor pulled a leg muscle whipping the fast Belfair's F.A.I. Racer. Such were the hazards of competition; for your reporter the closest escape from danger came when we politely excused ourselves from being entertained to lunch by the Mike Gaster, Dave Posner, Pete Muller community. They were offering what purported to be canned octopus!

### Trail of a lost model

An experience which we hope will have a happy ending has come to our attention from P. M. Roberts of Cirencester. He was flying a radio-controlled H.V.450 at R.A.F. South Cerney back in the summer of 1957, when it flew out of range and disappeared behind some trees. Permission was obtained to search farmland, but the model was not found even after repeated visits during winter. Details were left with the R.A.F. Guardroom and about a year after loss, news came that a large model was in one of the hangars. On investigation, it was discovered that the model had been seen by a helicopter pilot, "rescued" and apparently not identified, so it was given to an R.A.F. Corporal at another station, who cannot be traced beyond his last posting at R.A.F. Benson. The HV.450 had a red fuselage, yellow wings,

*At left: L. to r.: R. R. M. Ehrmann (Man. Director Airfix Products Ltd.), Lady Tedder, A. G. Elliott (Chairman), Lord Tedder, Mrs. Elliott, E. B. Orr (Director), S. C. Gardner (Sales Director), G. A. N. Gray. (See at right).*

a Hill receiver and Frog 250 diesel. Has anyone seen it? The wayward model deserves a homing after such a novel experience.

### High tension cable victim

It appals us, that after so many warnings and unfortunate accidents caused through flying control-line models near overhead high tension lines, that modellers should continue to risk life and limb. In a recent accident, a modeller contacted wire lines with the overhead cable and received severe shock and burns which later proved fatal.

We realise that many local flying fields are bounded by power lines, canals, railway lines and housing estates, but surely it is not necessary to tempt fate by flying close to one's obstacles. The safe distance for control-line operation from power lines should be a minimum of 100 ft. In damp weather, the H.T. spark can jump a considerable gap, contact is *not* essential for power to run down the model wires with results which do not bear thinking about. Be warned and fly with care.

### Museum Addition

The National Aeronautical Collection of the Science Museum, South Kensington, now has on display another transatlantic exhibit in the form of a Canberra nose section. This is the actual cockpit and crew compartment of the Canberra in which Wing-Commander R. P. Beamont flew from Ireland to Newfoundland and back in just over 10 hours on August 26th, 1952. Appropriately enough, the nose is on view beside the famous Vimy (*described last month*) which took 16½ hours to do half the journey.

### Gliding—friend or foe?

The comparatively recent expansion of R.A.F. Gliding units for Air Cadet training flights, etc., has embarrassed many S.M.A.E. areas in reduction of the number of airfields available for model flying. The situation in the South Midlands is typical and is such that no less than five airfields could be placed at the disposal of the Area for centralised contests *but* for the fact that week-end activity with the winches has prior claim.

Happily, at R.A.F. Henlow, close co-operation with the O.C. Gliding Unit (himself an ex-modeller) has allowed the meetings to take place on a divided airfield with the two activities taking place side by side. The success of this scheme has been keenly observed by all concerned, and may, we hope, result in a happier airfield situation for the future.

### 50 million kits!

A unique achievement in the history of the kit industry was made the occasion recently for a special presentation to Lord Tedder, Marshal of the R.A.F. and Chief of Air Staff during World War II. To celebrate the production of the 50 millionth constructional kit by AIRFIX PRODUCTS Ltd., Mr. A. G. Elliott (Chairman of the Company) presented Lord Tedder with a built-up model of the famed Lancaster Bomber, and further a cheque for £100 as a donation to the Malcolm Club Fund, with which Lord and Lady Tedder are so intimately connected.

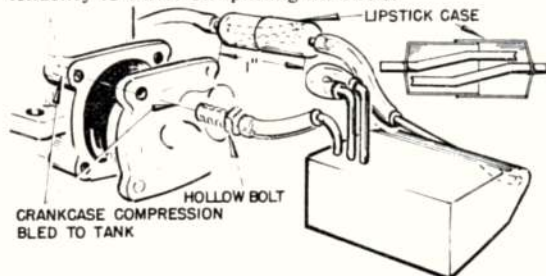
In thanking Mr. Elliott, Lord Tedder stated that he had first-hand knowledge of the extensive range of kits produced by Airfix, for his young son was rapidly working his way through the list of designs, and would soon be outstripping the production lines of the Company! In congratulating the Company on its remarkable progress, Lord Tedder paid tribute to the wealth of detail evident in the models exhibited, and ended by enrolling many of those present as Friends of the Malcolm Clubs.



WITH THE GENERAL standard of control line stunt so high throughout all the countries of the world, it is difficult for me to pass on much in the way of new ideas for improving your contest performance.

Flying a large stunt model is just about the nearest approach one can get to the real thing in flying, as it gives perfectly proportional control and offers a challenge to one's personal ability. When one has learned the fundamentals of stunt, improvement in performance is a matter of practice.

Rules have changed. Loops have to be tighter and models must go around square corners well. Squaring a model requires technique which calls for snap full control with quick relaxation to neutral. This reflex action must be practised continually before you get anywhere near perfect. Because the rules have changed, power loading is now more important. In England you fly a smaller model than we do, and you depend on power to pull you through the manoeuvres, whereas our planes over here in the U.S.A., which are up to 600 sq. in. are "flown" through all manoeuvres, not relying entirely on power. This is what we call *light* power loading and as the speed is not so great, we can make corrections during a loop, for example, to keep them at constant radius and also direct the wing-over when there is a tendency to waver on splitting the circle.



## Experts' Forum No. 7

New ideas  
from the maestro  
who sets the pattern  
for International c/l stunt

### Bob Palmer

Seen with new Thunderbird at left (*Veco* kit version will have inverted engine), Bob shows latest tip shape and his novel A.M.A. number—also his house number in Burbank

If we reduce the weight of the model, we find that it is a great thrill to fly and centrifugal force does not hamper the manoeuvre. For example, a model weighing 38 ozs. will weigh as much as 70 ozs. in a 20-ft. loop and if travelling really fast and over 80 m.p.h., may weigh nearly four times as much.

Keep the weight and the speed down. My ideal weight for 600 sq. ins. is about 38 ozs. with speed 60-65 m.p.h.

A universal problem for control line models is that of keeping the lines tight under all conditions. Wind always improves one's stunts, and here in California, we have the problem of trying to do prolonged manoeuvres in dead calm which is not so easy. Almost all of my designs have one wing longer on the inboard side rather than outboard. This is because the outboard panel is travelling faster and the inner panel requires additional lift to yaw the model. It also helps to tighten the lines.

We tried all sorts of flap proportions to help to keep the lines tight, and although having one flap longer and wider than the other does assist, it does not look handsome.

#### Differential flaps

As the originator of the flap control system, I thought it time that we found out something new and decided to attempt differential control and so discovered something which I am sure would be a great asset for all stunt designs.

The sketch shows how one flap is made to move more than the other, because there are two horns in the aeroplane going to two separate flaps. First, our experiments were rather drastic and went to 3/32nd differential. Now this was most successful, but the model rocked a little and did not come out smooth. All one needs for a 600 sq. in. model is only 1/32nd difference between the horn lengths as sketched and if you employ the actual dimensions quoted, you will find you can fly in all conditions with tight lines, especially in the more difficult manoeuvres. For example, the hour-glass and overhead



eight where down motion is required at the top way up in the circle and where it is awfully easy to upset the average model, so destroying the shape of the manoeuvre. With this flap working for us it actually pulled the wing right up and kept the lines tighter, making as many as twelve consecutive hour-glass figures a practical proposition.

Study the required wire thicknesses and use them as shown. This is very important and you must be sure that your controls are so free that the surfaces will flop about when not in use.

**Pressurised fuel feed**

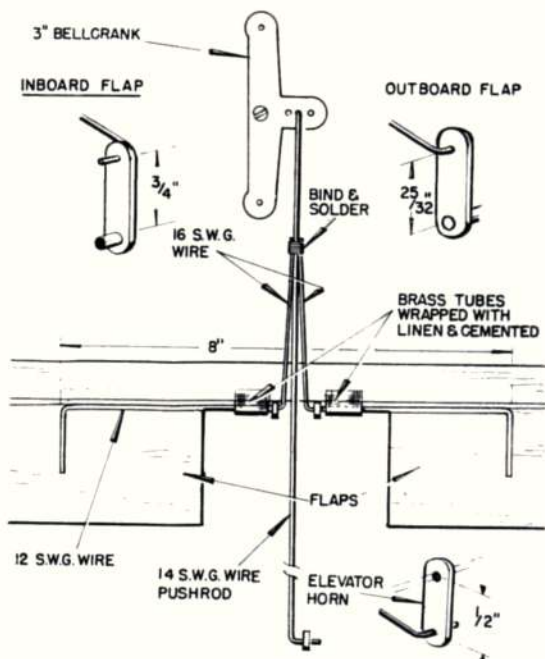
Another feature which is now becoming commonly popular over here in the U.S.A., is that of the pressurised tank method.

Veco provide a special hollow bolt for their motors which fits in the transfer side of the engine, and it is connected with fuel tubing to the tank, the vents of which are sealed and so there is constant pressure on the fuel.

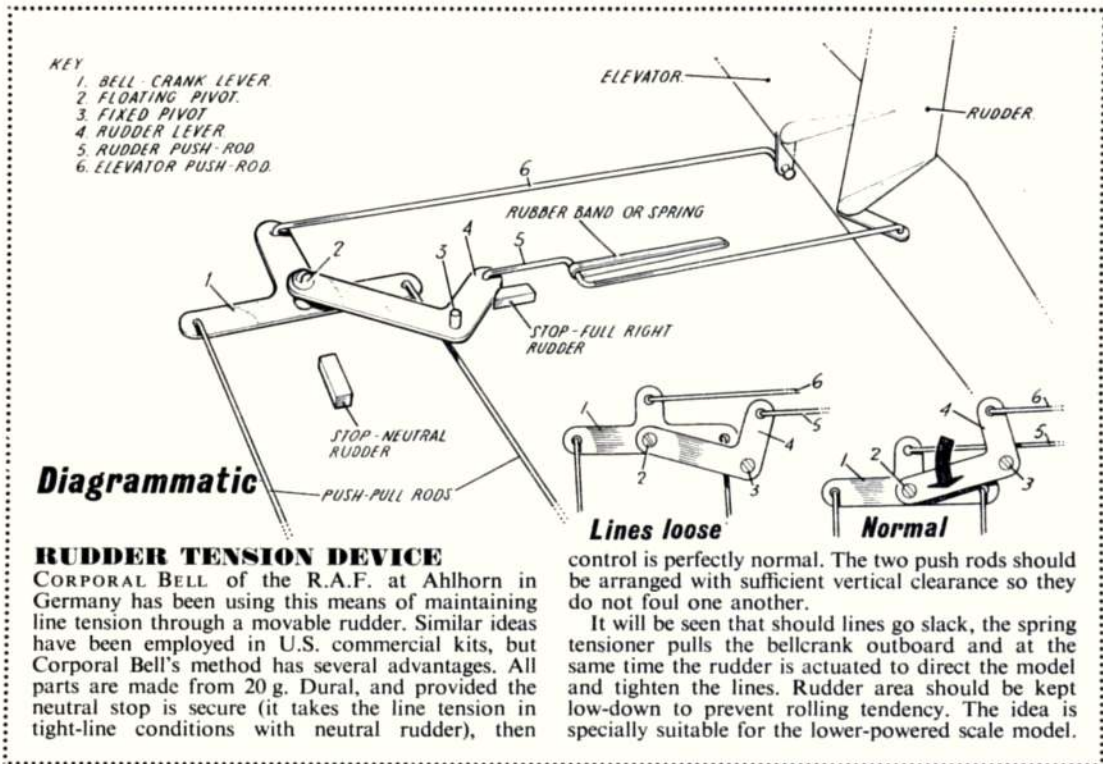
The size of the hole in the bolt is important. A large hole for a large tank, a small one for a little tank is the general rule. An additional fitting, which is of great value, is the compensator which carries a small reserve of fuel all the time and seems to help a lot and is used for radio and combat as well as stunt.

This is no more than a lipstick case which is prepared as in the sketch. Solder everything fuel tight and you have a perfect compensator. Now go out and practise your flying.

It is technique that wins contests and it is no earthly use flying manoeuvres where the judges cannot appreciate them or if you try to bamboozle the judges with explanations or excuses. Be a sportsman and fly your best and practise as often as possible and keep the model light. My new Thunderbird has added area at the tips, the



differential flap control and inverted motor with revised fuselage carrying a bubble canopy. Try to combine appearance with your model's performance and you will find that if a model looks right it will fly right.



# Record Nationals at SCAMPTON



## EAST MIDLAND VENUE ATTRACTED LARGEST EVER ENTRY!

Thurston Cup	Gliders	355
Sir John Shelley	Power	266
Super Scale	Scale f/f	22
Short Cup	PAA load	26
M.A. Trophy	Rubber	169
S.M.A.E. Trophy	R/C Multi	43
Ripmax Shield	R/C Rudder	
	only	50
Gold Trophy	C/L Stunt	41
Knokke Trophy	C/L Scale	21
Davies "A"	Team Racing	
Trophy	(2½)	98
Davies "B"	Team Racing	
Trophy	(5)	55
Speed—three Classes—& Combat		

*Australian Gold Trophy winner Brian Horrocks—and dressed to prove it!—now of Wolverhampton M.A.C. assisted by his cobbler Bernie Shenks, Liverpool, interpreting the strange British schedule, performing in the circle. The odd little fellow with the horns is of course, the famous Lincoln Imp—patron devil of those parts—whom legend tells once attempted to join his croaky voice to the cathedral choir and was turned to stone for all time by the scandalised cleric*

THE VAST V-bomber base at Royal Air Force Station Scampton near Lincoln was "invaded" for the best-ever attendance at the British Nationals on May 17th/18th. Scampton is an airfield steeped in history, dating back to Sopwith Camel days in 1917 to a pre-W.W. II Hampden base, and was the home of famous 617 Lancaster "Dam-Busters" Squadron during the latter stages of the last war. When we arrived on the airfield, a solitary silver Lancaster gleamed significantly in the morning sun to greet the modellers. It rested in lone state after a long flight from Canada, having come specially to commemorate 617 achievements, and with tailwheel firmly planted on the ground it seemed for all the world to growl "O.K. boys, the field's all yours for Whitsun; but keep clear of me, I'm valuable".

Unfortunately for the free-flyers, the field was by no means "all ours", and the wide berth one was obliged to keep around the security restricted buildings meant that recovery was a tough task across the farming areas of downwind Lincolnshire. And how that wind blew! Without the glorious two days of bright sun to bring some warmth in the blustery conditions it might well have been a less successful meeting. Many were the wings that snapped on towline gliders, or power models that could not fight the breeze and cruel was the way in which so many beautifully prepared scale models bit the concrete hard to wreck so many countless hours of patient preparation.

Yet it was a truly great Nationals, and one which will long be remembered by the thousands who attended. Many are the tales that will be told of radio aerobatics, of the Australian who so casually came and walked off with our Gold C/L stunt Trophy, of into-the-blue out-of-sight flights by the most improbable gliders, and of the appearance of what seemed like dozens of superb scale

models. The Commanding Officer himself had an interesting reminiscence when viewing the C/L scale section and seeing a Focke-Wulf TA 154. Group Captain Coulson, D.S.O., D.F.C., told us how in a Lancaster raid, his Mid Upper gunner claimed that he had shot down a twin-engine shoulder wing interceptor—and nobody believed him, until details of the TA 154 were revealed some time later! The model placed 2nd.

Campers arrived in droves, and the convenient field adjacent to the aerodrome soon became a colourful mass of canvas and car transport. No less than 3,300 gallons of water were consumed by the site on its first active day, and the bacon fry smell hung in the air as a constant appetizer. The boys were there to enjoy themselves, and that they were going to do despite the wind which held the dayglo windsocks horizontal all day long.

One of the first events to start the Nats off was control-line Speed. This noteworthy change from normal procedure was, in itself, indicative of the enthusiasm which prevailed in all events throughout the meeting; but especially so for speed. Never before have we seen so many really good speed models at a single meeting, and although records might not have been shattered, the top speeds were well up with standards in other countries. Monoline models from the Brixton team of Mike Billington and Dick Taylor sent the crowds scampering out of the circuit as they started Class 3 for 10 c.c. Later in the meeting Dick "collected" a speed model himself on his bad leg and was hospitalised with water on the knee. Curly-headed P. Drewell of Lewisham repeated his success of last year with a rousing 151 m.p.h. (Checksfield engine) and as the day wore on it became increasingly obvious that at long last this country has more than one group of experienced speed enthusiasts. Class 1

on the second day still displays our urgent need for potent 2.5 racing engines. Ray Gibbs won comfortably at 115 m.p.h., his only serious rival being John Hall's novel delta 3 m.p.h. behind; but these speeds should be higher for a team selecting eliminator.

It was only a spinner's throw to the next circuit and the Gold Trophy judged by Harry Handley and Eddie Cosh. It was a popular circle with the crowd, yet the majority missed the two outstanding flyers who happened to be practically first and last to perform. Brian Horrocks came from Australia last year with his pal Bernie Shenks. They joined British clubs and have become respected members of our modelling community. Yet if anyone had forecast Brian's success in the Gold this year, they would have been treated with reserve! He won over Roy Brown by as slim a margin as did Pete Ridgeway over Bill Morley last year, but both of them amassed higher points than ever before awarded on new-schedule flying. Brian's large area model with flapped 54-in. x 14-in. wing and Glow Chief 49 engine was ideal for the weather. Steady as a rock, yet slow enough for small manoeuvres, it impressed by its clean "squares" and high piloting standard from impeccable take-off to landing. Close behind in points but some six hours later Brown's *Coy Lady* repeated the performance and we had a few moments of suspense as judges totted up their points. A bounce on landing may have made the difference betwixt the two, they were so close in performance throughout the schedule. This is not to belittle Den Day's fine flight with modified *Calamity Jane* in third place to make it a big-model victory all-round. Not all the big stuff placed high. Hopkins of Bristol showed us what happens when both lines break at the end of a sq. eight, and Noel Falconer's model parted company with its OS Max 35 in spectacular fashion.



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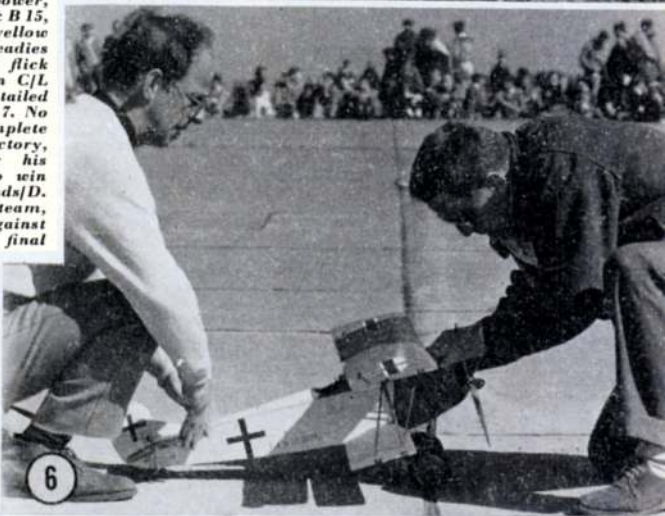
**WINNERS ALL!**  
 1. John West lights dft whilst Reg Boxall holds twin brother Fred, the Florentian, which he took to Florence with the A/2 team in 1956. Fred won the fly-off with 1:58. 2. Stewart Uvins brings his "Uproar" in for touch-and-go. His flying was the talk of the meeting. 3. All the way from Australia to win the Gold Trophy was Brian Horrocks with beautifully finished green and yellow model, has new type Glo-Chief 49 engine. 4. Only brand new PAA model entry was Arthur Collinson's winner, a 600 sq. in. Packhorse design by Stan Hill, weighs 47 oz. all-up, has an O.S. Max 15. 5. George French of Laindon, only man to make triple maximum in power, used a Ramrod 440 with K & B 15, model has smart red and yellow finish. 6. Captain Milani readies his Taplin Twin for first flick start with winning flight in C/L scale with wonderfully detailed scale Fokker DVII. 7. No Nationals would be complete without an O'Donnell victory, here John launches for his second of three maxes to win rubber. 8. Dick Edmonds/D. Langston, High Wycombe team, won F.A.I. team race against great odds in a furious final



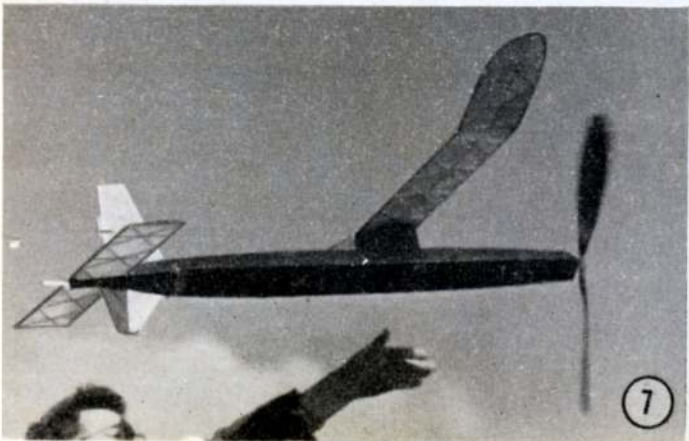
4



5



6



7



8



13. C. Crawley of Mill Hill made 1st F/F scale flight with Mills 1.3-powered Bristol Racer from A.P.S. rubber Plan 216, 4/-. 14. 2nd this year, Kendrick's team of Black Ghosts were narrowly out-pointed in combat. 15. Margaret Hannay and John Done prepare "Len" Hutton's A/2, typical of Wallasey club co-operation. 16. Den Day with modified Calamity Jane (plan 489, 4/6), 3rd in Gold. 17. Noel Falconer, RAFMAA, lost his OS 35 in a tight manoeuvre to make unique landing!



9. Judges Henry Nicholls and "Rushy" watch Frank Van den Bergh's masterly controlled take-off for 3rd place in multi. 10. Can you hear me Chris? Reed tones checked by Messrs. Olsen and Uwins, the Uproarious pair. 11. Ray Monk's PAA entry well away in take-off. 12. Den Grocott (Salisbury) 2nd in single R/C with Enya 19 and OMU R/C gear

It was not a day for smaller diesel-powered models and our only impression on this side was of a particularly fast 3 c.c. bored out Rivers Silver Streak and Gig Eiffelaender's new PAW 1.5—each an engine to look forward to.

**F.A.I. Team Racing** to the new regulations was slickly organised by Hornchurch and Dagenham clubs. The profusion of these large racers refutes the suggestions that the rules would kill enthusiasm, and Gordon Stephen's shattering heat win of 10 Kilometres in 4:23 was treated with as much incredulity as if the Government had removed purchase tax! Incredible as the time may seem, there is no doubting that it is genuine for Stephens has the fastest Oliver Tiger anyone has ever seen and the airspeed of his model with Chas. Taylor legally whipping under the ridiculously tolerant F.A.I. regs, cannot be short of 100 m.p.h. The pity is that this skilled Belfairs team were literally knocked out of the final by a model that hit Stephens on the temple whilst at a pit stop. Poor Gordon didn't have a chance after that, and in extra hard whipping to catch up after the delay, Chas. Taylor pulled a leg muscle! It was a Dick Edmonds victory, unfluffed by having to make a prop change, working methodically with his pilot Dave Langston, Dick now has his name on the Trophy more times than he cares to remember, and always after a terrific battle with around 100 entries. Once more he becomes our mainstay for the Criterium d'Europe—and we hope Belfairs' misfortune will be considered when teams are selected.

Down the runway from the screaming controliners was a solid mass of humanity (and competitors' cars) alongside the take-off area for Multi-Channel R/C. There was a large entry but many retired either on sight of the weather, or perhaps the early flights by Uwins, Olsen and Van den Bergh, who set a standard hitherto unparalleled at a British meeting. Chris Olsen had flown the "works" including knife edge flight when his

*Uproar* went in (a motor brush had broken) and so lost both his 14th airframe in the series and his critical landing points. It was left to pal Stewart Uwins to fly faultlessly and keep the Trophy in the family so to speak with his 7th *Uproar*. This one has 6-channel Olsen Tx and Rx, 4 Olsen servos permitting ailerons in one direction only and engine control plus rudder elevator, and in lunch time and evening breaks Stewart had the field enthralled with outside loops from low inverted, long spins to recovery at 30 ft., and an immunity from wind conditions equal only to the pilot's confidence. When at last, after a superb 10-minute show he confided that the ailerons were stuck, he just said "I'll throttle back and hold her with rudder" and that he did all the way down with only a chipped prop to signify that anything had been wrong. Third place man, Frank Van den Bergh, has an Orbit 8 Tx, C.G. Rx, Bonner servos and Johnson 35 in an *Astro Hog* from A.P.S. drawings. His taxi out and taxi back each end of flights were just the kind of control we've been missing in this country, and with more practice on the schedule, Frank is the man to watch in the future.

Free flight used as long a stretch of the field as was allowed, PAAload for the Short Cup looking like a grand re-union of past British power teamsters, with elderly models to match. Was it significant that the only brand new one—a Stan Hill *Packhorse* 600 for OS 15, by Arthur Collinson should come out top? Not really, Arthur would be first to admit to lucky lift though it was fine power trim that got him so much height. Congratulations to J. Sayer of Tees-side for breaking into the elite with an honourable 2nd place!

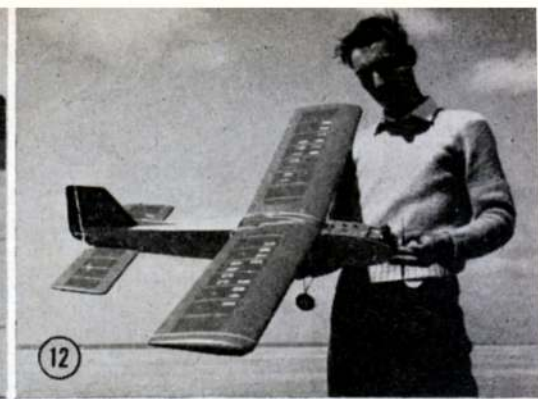
Glider is always an administrative headache, and with 360 entries in a 3 flight one-day event YOU try running the comp without timekeepers. That was the situation when we called in at an early stage: but somehow, with many retirements and lots of

coaxing, the event ran smoothly to the only fly-off of the Nats. This was delayed for some time in the hope that W. Waters might return with his model, last seen heading homewards to South Wales! Unfortunately, he didn't make it so the other three launched in cold, gusty air to return even lower times than usual for a vital end-of-day fly-off. L. Foster of Sheffield was favourite: he had an *Inchworm* and it seemed logical that after so many other Nats wins in the Commonwealth, etc., dame fortune would help it along. But the worm turned—and unhooked for only 14 secs., leaving Fred Boxall to complete the South Coast dominance of this event over the past four years, brother Reg and the Giggie family also having their names well and truly inscribed on the Thurston Cup. Last year Fred won the Model Aircraft Trophy for Rubber but no "double" was coming for him at this Nats as John O'Donnell quickly decided. Losing two models to make sure of two max's, the story goes that he got both back to make his choice as to which to lose on the last max! Anyone who could recover three 4-minute max's in such conditions was a hero, which gives Eric Barnacle's third place this time (second last year) all the more credit for he was carrying quite a weight of plaster jacket around his chest after falling from a tree a few weeks before. No doubt his Leamington clubmates saw to it that his *Bongos* were not lost. We should not forget, too, that the grand old man of Northern modelling, C. P. Miller was a scant 10 secs. short of giving J. O'D. a fly-off.

18. L. Burrows of Blackheath had fast climbing Veco 19 Smith-type design. 19. Victorious Razor Bladers from Northwood. Stevens on left, Tribe, right. 20. Smart Class B racer, 4th in final, by Chastell of Hackney in cream finish. 21. Monoline McCoy 60 speed entry by Mike Billington of Brixton. 22. Sid Miller's impeccable Rhoma (Plan 546, 6/-) gets a rub-down after high flight



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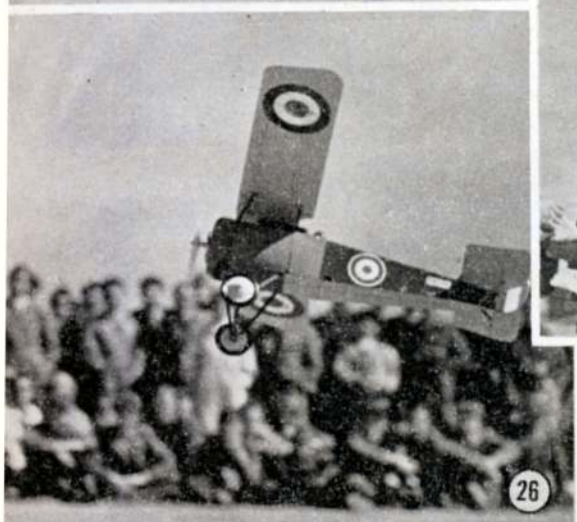
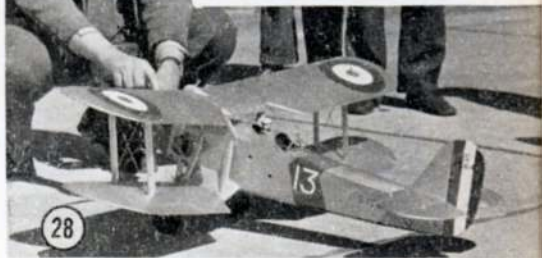


22



## SCALE BEAUTIES

23. Silver and yellow Heston Phoenix by J. Bridgewood now boasts a pilot as well as retractable u/c. 24. Winning SE5a from Doug McHard's plan (A.P.S. 682, price 3/6) flew like a duration model for builder Den Partridge of Croydon. 25. Ambitious Sikorsky S-39D by A. W. Evans of Mill Hill deserved calmer conditions, but shewed it could fly though on its first outing. 26. A.P.S. Sopwith Swallow (Plan 625, price 6/6) came third in freeflight for J. Simmens of Northwood. 27. Snappy take-off by A.O.P.9 (A.P.S. Plan 580, price 4/6) unfortunately ended in crowd. 28. Blackburn Ripon by R. F. Coates of Blackburn Welfare Club flew well from realistic take-off, E.D. 2.46 engine. 29. Focke-Wulf TA154 by P. Wheldon has two A.M.15s, beautiful finish, came second in C/L scale. 30. Bill Meechan of Glasgow prepared his Saunders-Roe A.10 for a startling loop from take-off—a slight case of wind! 31. Colour scheme of A.P.S. Viscount 701 (Plan 701, price 8/6) was outstanding on George Miles's model from Blackheath and Hales-owen. Has two A.M.10, one each Frog 249 and E.D. Racer. 32. Hawker Tempest by George Fletcher is to be new Frog kit, has engine speed control for Frog 249. 33. Large scale Chipmunk (Frog 500) by Cpl. Godfrey was very realistic, including noise



Is it right that power models do not travel so far in 4 minutes? The initial overhead climb must save some of the chase for how else could Laindon farmer George French have eclipsed power with just one very well-made *Ramrod 440* to make, (and retrieve) three max's? 226 entries made the Sir John Shelley for Open Power a jamboree of prangs and exciting climbs. The ETA 29, McCoy 29 and a single Merco prototype were there to stimulate with high power variations: but George's little K & B 15 torpedoed opposition, including countless Olivers. Our most vivid memory is of an ETA job whose wings clapped tips, parted at the root, and left the fuselage to accelerate at missile rate in realistic ballistic curve.

Speaking of realism brings us to Scale. Control-line on the first day, free flight the second day, the two combining to be the biggest crowd draw and the most fascinating events of the meeting—NO we are NOT biased! The pity of it was that so many of these beautifully prepared models had never flown before, and the Nats is no place to test fly, even in calm weather. Pictures tell the story of the variety in scale subjects. Cesare Milani's *Fokker D VII* with Taplin Twin had the magnificent internal detail we have come to expect of this exacting modeller, and coupled with a fine flight, this gave him the lead over C. P. Wheldon's superbly finished *TA 154* with all its radar gear bristling on the nose. The *Viscount* by George Miles had a very lucky escape in dire straits when power losses were too great to cope with the wind, and Cpl. Godfrey's *Chipmunk* must have lost scale pointing, for its airborne

demonstration was most impressive. Free-flight went to the model that flew longest, but that is no reflection on Den Partridge's well-made *S.E.5a*. The *Phoenix*, *Swallow*, *Sikorsky*, *Ripon*, *Caproni* and *Bristol Racer* must have given judges Alex Houlberg and Bob Gosling a tough time and all deserved a medal for merit in endeavouring to fly under such conditions.

The Midland Area had Class B Team Racing well under control. The final outcome that it would be a W. Essex Enfield/Wharfedale fight was obvious from the start, and when McNess produced 40 laps per tank at no apparent loss of speed, there was little chance for the others. Yet it was a slow final, everyone having some trouble or other, prop breakages included; but none as serious as the unfortunate Len Steward whose engine appeared to be digesting itself from the amount of metal in the exhaust sludge. At least he had no plug troubles as he was using a prototype of the new A.M. glow plug with a new wire element.

After the excitement of multi on the previous day, Single Channel R/C was comparatively tame. E. Scoles's 90 per cent. points lead over his nearest rivals may have been indicative of local wind experience for he alone completed the course properly and returned close to base. His ETA 29 model is basically *Smog Hog* with the wing 2 in. back and larger tail to compensate. Radio gear was all home made, including 120 v. Tx, Hill receiver and Bonner type actuator with third stop for engine speed. Weighing 6½ lb., the model had the penetration needed against

They do it everywhere!



30 knot winds; several other entrants having to forget their patterns and simply concentrate on keeping the model facing forwards as it soared to cloud level (1,500 ft.) without making headway. As someone said, "A little elevator makes all the difference!"

So to the last to finish—a final that few except the interested parties watched, and which decided the *Combat* result between Northwood and the Black Ghost teams. It was almost as if the solid 15 hours of streamer chasing need not have taken place when Kendrick and Stevens fought it out and like most closely matched "spectaculars" it was almost a tame finale to the meeting with Stevens collecting the prize money by virtue of fewer negative points. Still we'll give him and his club their due—never before have we seen an Oliver Tiger changed in a pit stop. Surprising how quickly it can be done with a Stanley 'driver!' R.G.M.

## RESULTS (Provisional)

### Thurston Cup (Glider)

1. F. Boxall (Brighton) ...	9:00+1:58
2. G. Tideswell (Baildon) ...	9:00+0:55
3. C. Foster (Sheffield) ...	9:00+0:14
4. P. Waters (Port Talbot) ...	9:00

### Short Cup (P.A.A.)

1. A. Collinson (Baildon) ...	9:34
2. J. Sayers (Teesside) ...	7:34
3. J. O'Donnell (Whitefield) ...	7:00

### Gold Trophy (C/L Stunt)

1. B. Horrocks (Wolverhampton) ...	444
2. R. Brown (Lee Bees) ...	441
3. D. Day (Birmingham) ...	384

### Knock No. 2 (C/L Scale)

1. C. Milani (Wayfarers) ...	137½
2. C. Wheldon (B'Heath & Halesowen) ...	110
3. R. Moss (Eastbourne) ...	81½

### S.M.A.E. R/C (Multi)

1. S. Uwins (C member) ...	174
2. C. Olsen (C member) ...	145
3. F. Van den Bergh (Bromley) ...	119.5
4. J. Dumble (A.R.C.C.) ...	47
5. F. Haxton (C member) ...	43.5
6. M. Franklin (Leicester) ...	38

### Davies "A" (F.A.I. T/R) 10 Kilometres

1. R. Edmonds (High Wycombe) ...	6:2.3
2. D. Tyler (Feltham Eagles) ...	6:16.2
3. F. Baxter (Wharfedale) ...	6:27
4. R. Stephens (Belfairs) ...	6:32

### Davies "B" (5 c.c. T/R) 10 miles

1. I. McNess (W. Essex) ...	8:23
2. D. Walker (Enfield) ...	8:35
3. K. Lang (Wharfedale) ...	8:39

### Ripmax Trophy (R/C Rudder/Engine only) Pts.

1. E. Scoles (N. Lines) ...	44.5
2. E. Johnson (A.R.C.C.) ...	24
3. D. Grocott (A.R.C.C.) ...	24
3. S. Miller (Luton) ...	23
4. V. Nixon (N. Lines) ...	19.5
5. P. Dowker (Kendal) ...	17

### Super Scale Trophy (Free Flight) Points

1. D. Partridge (Croydon) ...	126
2. J. Bridgewood (Doncaster) ...	110
3. J. Simmons (Northwood) ...	107
4. H. Evans (Mill Hill) ...	102½

### Speed (2.5 c.c.) m.p.h.

1. R. Gibbs (Hornchurch) ...	115.3
2. J. Hall (Belfairs) ...	111.9
3. R. Irvine (Glasgow) ...	99.87

### (5 c.c.) m.p.h.

1. J. Watson (Lomac) ...	131.6
2. I. Roffey (Lomac) ...	124.3

### (10 c.c.) m.p.h.

1. P. Drewell (Lomac) ...	151.2
2. D. Howell ...	142.5
3. M. Billington (Brixton) ...	133.1

### Combat (2.5 c.c.)

1. R. Stevens (Northwood)	
2. M. Kendrick (W. Bromwich)	

### Sir John Shelley (Power)

1. G. French (Laindon) ...	12:00
2. B. Talbot (Wigan) ...	11:31
3. K. Smith (Croydon) ...	11:03

### Model Aircraft Trophy (Rubber)

1. J. O'Donnell (Whitefield) ...	12:00
2. C. P. Miller (Baildon) ...	11:50
3. E. Barnacle (Leamington) ...	11:26

34. F.A.I. T/R final was hectic, whipping marred the event. Baxter (Wharfedale), Taylor (Belfairs), Langston (High Wycombe), Lambert (Feltham) are pilots in this shot. 35. Winning "B" Team: Picton, McNess and McGoun of West Essex with 40-lap special. 36. Fastest of all F.A.I. racers, Stephen's "Van Dyck 2", was the favourite, but pit man got knocked-out!





ORIGINALITY IN STUNT model designs is said to be difficult; but when one examines the number of new models which appear each year in aerobatic circles, the hard fact of the matter is that controliners always prefer to take the easy way out and copy their more successful predecessors.

In *Coy Lady*, R. E. Brown of Portsmouth, has produced a fairly new line of thought—and certainly includes the attributes of the latest U.S.A. designs while retaining an easy-to-build structure and handsome appearance. Moreover, it stunts like a true champion—the only limit to its performance through the toughest schedule, is the operator's ability, so why not pick your "29" or "35" from the galaxy now in the shops and get cracking?

Sandwich 23 rib blanks between  $\frac{1}{8}$  in. ply master rib templates, shape, sand and cut spar slots. Cut out R13 and R14. The **Wing** is built in two parts, and joined with  $\frac{1}{4}$  in. sheet webs and braces, etc. Ribs are first assembled on the T.E. and lower rear spars. The bottom T.E. sheet is pinned down, and the  $\frac{1}{8}$  in. square insert is glued on top, the  $\frac{3}{16}$  in. square rear spar is blocked up to obtain an accurate taper, the top rear spar is added, also the top  $\frac{1}{4}$  in. main spar and leading edge. The  $\frac{1}{8}$  in. square insert is then tapered and the top sheet T.E. added. When dry and removed from the board, the lower  $\frac{1}{4}$  in. main spar is added, and sheeted L.E. and  $\frac{1}{8}$  in. sheet tip L.E.; Finally, the  $\frac{1}{8}$  in. sheet tip-plate and webs and sheeted L.E. Care must be taken to avoid a "built-in" warp! Flaps are then shaped from  $\frac{3}{16}$  in. medium soft sheet, joined with the control horn and hinged with tube and wire or tape according to preference. Fit the flaps after the sheeted wing and flap horn have been slipped through the fuselage. The bellcrank is bolted in position on the  $\frac{1}{8}$  in. ply base (4 B.A. bolt) and fixed before the centre section is covered with sheet. The flexible leadouts can be added at this time and threaded through the rib slots, which should have been cut for same. Use double "heavy" laystrate for the leadouts, also a soft wire line guide as shown on the plan to avoid any possible chance of binding.

**Tailplane and elevators** are made of  $\frac{1}{8}$  in. medium-soft balsa, cut and sanded to symmetrical section,  $\frac{1}{2}$  in. x  $\frac{1}{16}$  in. blanks being added and sanded to confirm with the section of ribs.

**Unanimously voted the smoothest stunt model at the Nationals. This 580 sq. in. design for 29 and 35 engines placed within three points of winning the 1959 Gold Trophy.**

Designed by R. E. Brown

## Coy Lady

**Fuselage** has the usual  $\frac{1}{8}$  in. medium sheet sides with 1 mm. ply doublers up front. When these have been added the  $\frac{1}{2}$  in. x  $\frac{3}{8}$  in. beech motor mounts can be cut to length and fixed. Formers are then cut from  $\frac{1}{8}$  in. ply and  $\frac{1}{8}$  in. balsa. Fuselage can then be assembled not forgetting the  $\frac{1}{8}$  in. square and  $\frac{3}{16}$  in. square braces and supports. The wing is slotted through and fixed before top decking and bottom are attached, also the tailplane, the latter being fixed after the control rods have been added.

When the wing has been fixed, a certain amount of the  $\frac{1}{16}$  in. sheeting inside the fuselage will have to be cut out to allow the flap rod to be engaged in the bellcrank, and the bellcrank bolted down to a nice swivel fit. Also add a support to the top of the 4 B.A. pivot bolt, i.e., between R1 and R2 (small strip of  $\frac{1}{8}$  in. ply).

After wing and tail have been added the motor mounts can be drilled and the bottom sheet and block added (having fixed your 6 B.A. nuts to a small piece of tin and fixed to the bottom of the motor mounts). Add the nose blocks (soft  $\frac{1}{2}$  in. former F.I. then remove engine and add the top spine and backbone, fix the sheet fin in place, then cover in with medium  $\frac{1}{16}$  in. sheet. Lastly add pilot, ply former and cabin. Undercarriage is bent to shape and bolted between ply formers with plenty of Durofix.  $\frac{1}{8}$  in. or  $\frac{3}{16}$  in. balsa fairings can be added any time.

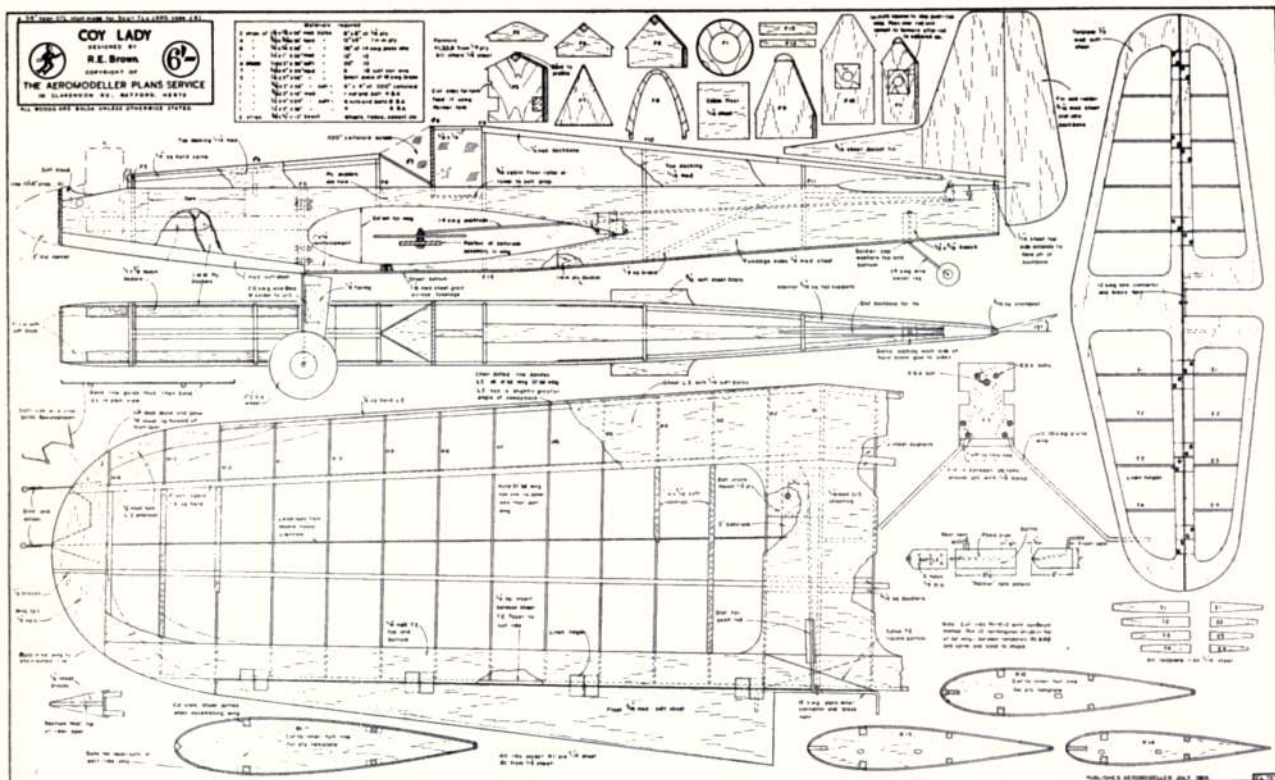
Wing tip weight used was only just enough to outweigh the inboard wing, this, combined with the line stagger and the amount of fin offset shown and the C.G. (This not being very sensitive, weight varied quite a bit on the three models built thus far) gives ideal "pull" on the lines.

Use 60 ft. light laystrate lines, the flap movement is 25-30 degrees and elevator 45-50 degrees. The weight at 40 ozs. could be increased without much anxiety and the originals have all been powered by McCoy 35's.

*Coy Lady from another view-point of 2nd prototype*







FULL SIZE COPIES OF THIS 1/7th SCALE REPRODUCTION ARE AVAILABLE AS PLAN C/L 727. Price 6s. 6d. POST FREE FROM AEROMODELLER PLANS SERVICE

## Good Samaritan

DEAR SIR,

I would like to tell you about a "good deed" at the Nats. Whilst practising on the Sunday I had the misfortune to damage my Oliver con-rod. I asked everybody who had an Oliver if they possessed a spare con-rod and, of course, they had not! When I got as far as the Prestwick M.A.C. group someone said "I think so". He dived into his box and sorted one out, then we found out that the little end was a lot smaller, so he said borrow the whole unit and he lent me a cylinder, piston and con-rod. When I got back to my own club and fixed the engine up I realised we had not exchanged names or anything. I got through the first round combat and went in search of him. On finding him and telling him that I would need it for the next day he said he might not be coming but I could send it to him later. Needless to say I have since returned the engine to R. Cunningham of Kilmarnock, a true friend indeed.

J. G. MARTIN.

Nottingham.

We were particularly impressed by the bearing and politeness of the Scots lads who were represented in all events. They had rough luck and deserved a place in the F.A.I. Team Race final.—ED.

## Stunt appeal

DEAR SIR,

With the 1959 Competition Season rapidly filling up, and remembering many letters from 1958 copies of the AEROMODELLER, I would like to appeal once again to the S.M.A.E. and those who organise Rallies, especially in the Southern half of England, to include a STUNT event in their programmes. Throughout last year at various "F/F only" competitions, many keen Stunt fliers were in evidence with their models and were complaining of following the Rallies round in the vain hope of finding an unadvertised Stunt event.

Despite the facetious (sometimes unkind!) remarks made about us, Stunt fliers are REAL aeromodellers in every sense of the word, and most are extremely keen to get

## Readers write

a look-in at the Rallies. So organisers please include a Stunt Comp.—after all, it's not so worrying to run as a Combat Comp., is it? Tarmac runways are not essential, grass will do.

L. GLOVER.

Swindon, Wilts.

## Dope in the eye

DEAR SIR,

Please print this as a warning to the aeromodelling fraternity. Don't get dope in your eye! I did, I have been off school now for four days with a sore eye, and have to bathe the eye and have drops in it every two hours. The moral: Don't flick your brush around till you're sure it's DRY.

J. M. THORPE.

Batley, Yorks.

## Aussie Lancaster

DEAR SIR,

Referring to P. Scott's enquiry in the June issue, the particular Lancaster concerned is the subject of the "Airfix" 1/72nd Kit—"AR-G W4783"—and the write-up included in the kit indicates that 90 operations were carried out by this aircraft with 460 Squadron R.A.A.F.

Having already checked up on the code letters/serial numbers, etc., of the "Airfix" kits for the Mosquito, Beaufighter, R.E.8 and others (and found them to be correct), I personally would be prepared to accept the details quoted for the "Lancaster". Perhaps Mr. Scott has not seen the "Airfix" kit—if not, it is 7s. 6d. well spent!

R. FIELDING.

Rochdale, Lancs.

Dear Sir,

The Lancaster "G" for George is in the Australian War Museum. George made 90 missions over enemy territory. First war flight was made on the night of December 6th, 1942, and its last on April 20th, 1944. To its last trip the bomber had only one

major inspection at 343 hours. 200 men spent 664 hours and 5 minutes of operational flying time in "George", as well as bomb symbols "George" had the D.F.C. and the C.G.M. painted on the side.

The foregoing information has been taken from a book entitled "R.A.A.F. OVER EUROPE" edited by Frank Johnson, published in November, 1946.

Southampton,  
Hants.

P. F. WAINWRIGHT.

These are two of many replies to the request in June—thank you, all those readers who wrote to help Mr. Scott.—ED.

## All-sheet hot shot

DEAR SIR,

May I thank you for the pleasure obtained from flying *Ebenezer* (published April, 1958). I think I can claim to have had more fun with this model than any other.

Might I suggest the following slight modifications which have improved the performance of my version tremendously.

1. Remove both wings.
2. Throw lower one away.
3. Secure upper wing in lower position.
4. Take hatchet, cross-cut saw, broken razor blade, etc., and remove pylon.
5. Cut elevators in tailplane and fix at about 1/4 in. "up".
6. Start motor (E.D. 46 in my machine) and run it at max. r.p.m.
7. Hurl model into wind (if any) and take cover.

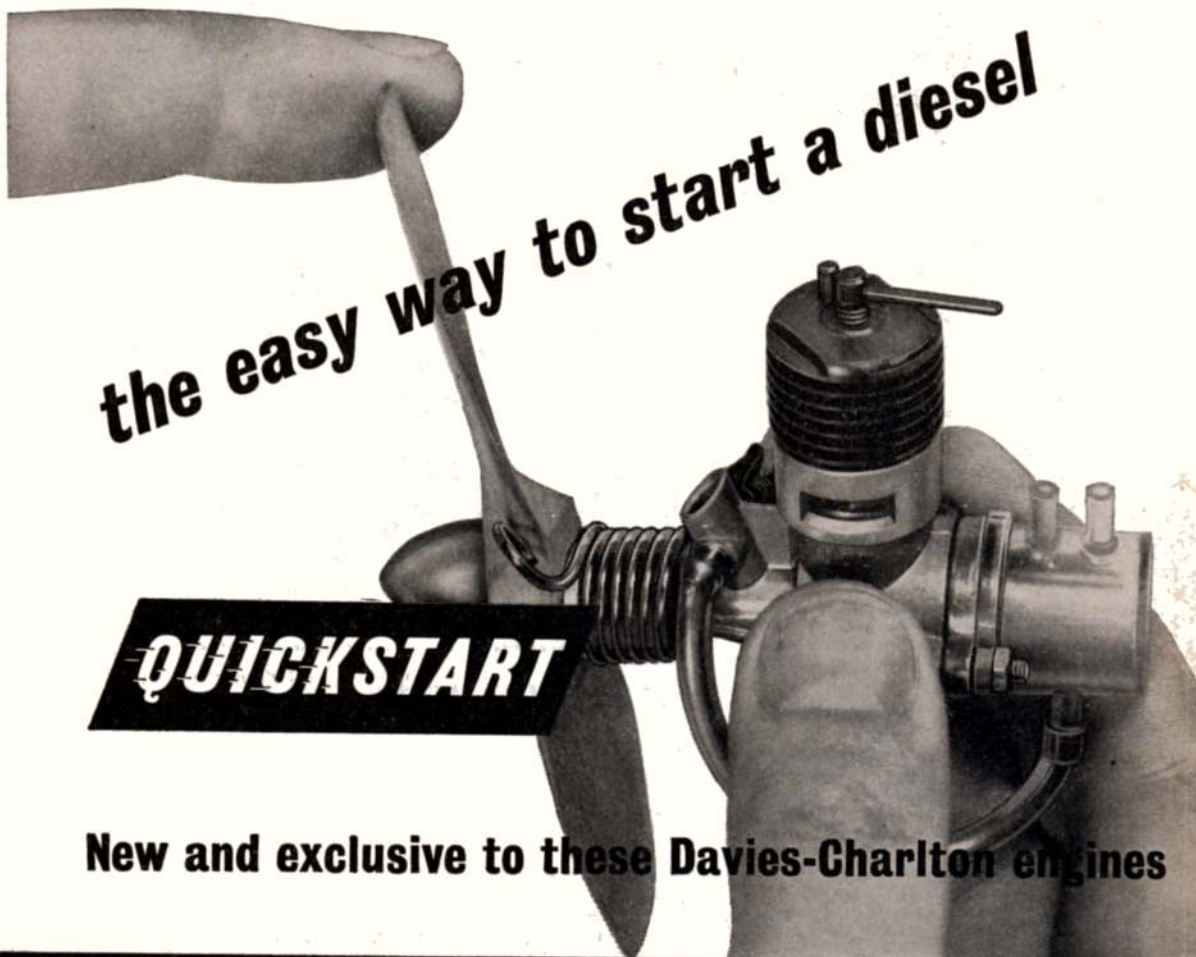
Seriously, this machine is really fantastic, very fast with shallow climb, it will frequently drop a wing and "strafe" the take-off point before climbing away in L.H. circles. Left thrust should be balanced with right rudder (R.H. power turns are fatal) and all the downthrust one can use, i.e., 8-10 deg.

Take-offs are most realistic, a comparatively smooth run of 50 to 60 feet is needed.

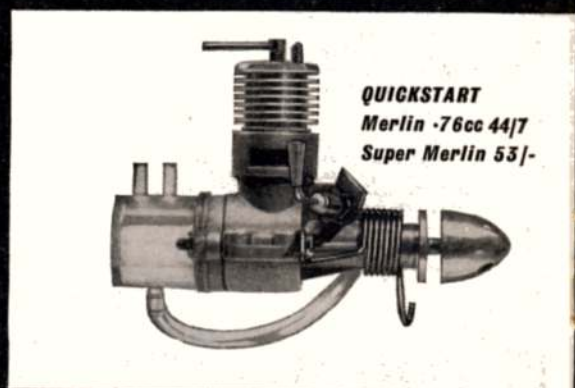
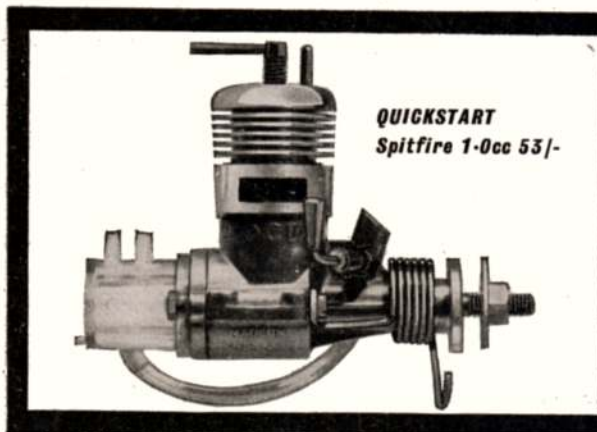
My *Ebenezer* is now on the shelf, as I have worn my engine out with continual flying, but you should see my next machine!

S. PEARSON.

Kingston-on-Thames.



**New and exclusive to these Davies-Charlton engines**



With four other 'easy starting' extras

- ★ new style fuel tank — non-spilling; positive feed
- ★ redesigned jet assembly for non-critical adjustment
- ★ new limit pin prevents over compression
- ★ new style crankcase

**QUICKSTART****really lives up to its name**

This outstanding diesel development enables even the beginner to start his Davies-Charlton engine with only a turn of the propeller.

*No more hours of finger-weary flicking!*

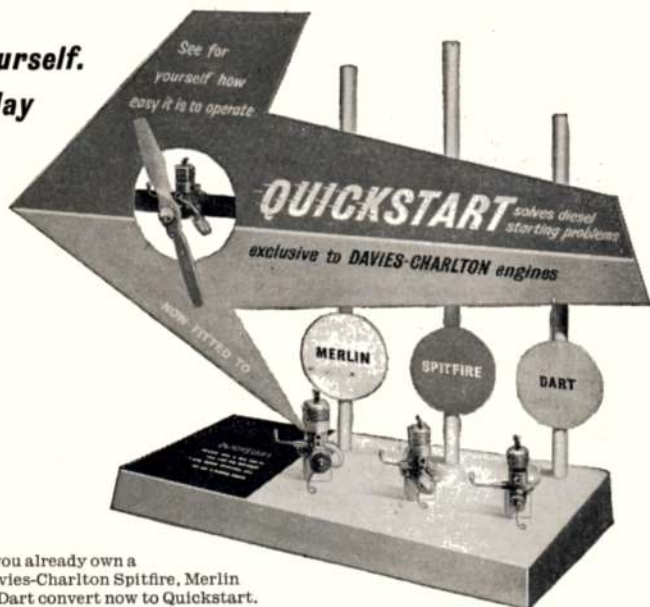
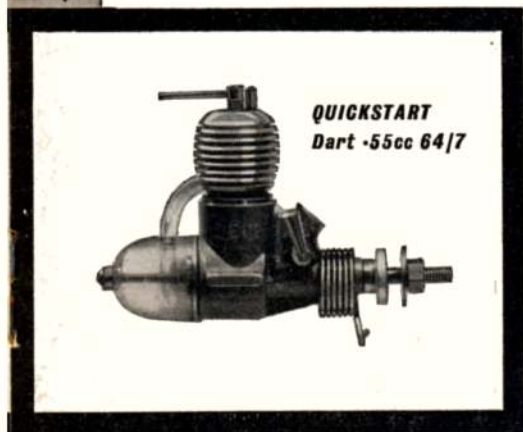
*It's a simple device! . . . a uniquely effective device!*

Quickstart is a tempered steel spring which fits over the propeller shaft and engages with the blade.

A turn of the propeller and, on release, the engine will turn over at least three times against compression.

When the engine starts the spring recoils free from the blade.

**Try Quickstart for yourself.**  
**Look for this display**  
**in your local Model Shop**



If you already own a Davies-Charlton Spitfire, Merlin or Dart convert now to Quickstart. Conversion kit 2/6.

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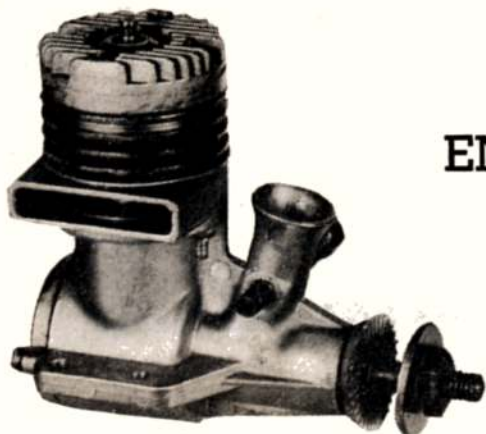
MODEL DIVISION

# ENGINE ANALYSIS No. 61

by R. H. Warring

## FOX 15

American 2.5 c.c. glow-plug engine rapidly gaining popularity in Britain



THE FOX 15 is a beautifully compact 2.5 c.c. glow motor weighing just 4 ounces. Whilst not specified as an out-and-out "performance" engine, it also packs a healthy power output, peaking at nearly .22 B.H.P. between 13,000 and 14,000 r.p.m. This, of course, is a static test figure which is always unflattering to glow motors. In the air they appear to have the ability to speed up far more than diesels which is why a static power figure—or even a static propeller r.p.m. figure—is very rarely a fair comparison between these two types.

The specimen tested had already had some use and was well run in. Main bearing fit was quite slack and there was very little compression when turned over—typical of the "ideal" set up for a high-revving glow motor. That last comment, in fact, characterised the Fox 15. It is a high speed motor and is not particularly happy either for starting or running at speeds below about 10,000-11,000 r.p.m. Yet its running is steady and sustained well past the peak, up to an 18,000 plus figure achieved on a tiny plastic propeller.

Needle valve control proved somewhat sensitive on the fuel used (Mercury No. 7). The Fox 15 definitely seems to prefer a lean mixture for starting (one, or at the most two, choked turns), and a slightly rich setting for running. Running on a lean mixture it had a tendency to cut abruptly due to a slight change in the fuel supply—probably aggravated by the fact that the effective suction lift is quite small. Excessive choking or priming for starting simply produced a "wet" engine which showed no signs of clearing itself.

Apart from this tendency to be slightly critical on needle setting, running was very consistent at all load-speeds above 12,000 r.p.m. Possibly some slight gain in performance could have been realised with a more highly doped fuel (Mercury No. 7 containing only 13 per cent. nitromethane) but could not be expected to come up to top racing performance. But for sport flying and control line work, the Fox 15 is a most useful power plant.

For free flight an 8 x 4 propeller would appear best; and possibly 7 x 6 for control line.

### Specifications

#### Technical Data

Displacement: 2.415 c.c. (.147 cu. in.)  
Bore: .591 in.  
Stroke: .537 in.  
Bore/Stroke ratio: 1 : .908  
Bare weight: 4 ounces  
Max. power: .218 B.H.P. at 13,500 r.p.m.  
Max. torque: 18 ounce-inches at 11,000 r.p.m.  
Power rating: .09 B.H.P. per c.c.  
Power/Weight ratio: .055 B.H.P. per ounce

#### Material Specification

Cylinder: Mild steel  
Piston: Cast iron  
Crankcase: Light alloy die casting  
Connecting rod: Light alloy die casting  
Cylinder head: Light alloy casting  
Main bearing: Hardened sleeve  
Crankshaft: Hardened steel  
Propeller driver: Light alloy casting  
Spraybar: Brass  
Back cover: Light alloy die casting  
Glow Plug: Standard KLG glow plug used for tests

#### Manufacturers

FOX MANUFACTURING COMPANY INC.,  
Fort Smith, Arkansas, U.S.A.

#### Importers

H. J. NICHOLLS LTD.,  
308 Holloway Road, London, N.7

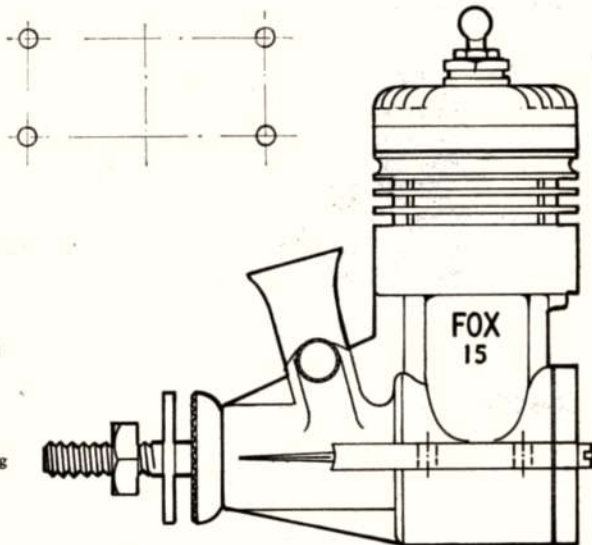
Constructionally the Fox 15 features a soft mild steel cylinder machined with integral fins. A substantial flange takes the exhaust port cut-out at one side, and diametrically opposite, the transfer is machined upwards into it in a half-moon shape. The transfer overlaps the exhaust to a considerable degree and opens only very shortly after the exhaust.

The piston is of lightweight form, machined from cast iron, and with a flat deflector offset to the transfer side on the top. The fully-floating gudgeon pin is quite small (only  $\frac{1}{8}$  in. diameter) and is unhardened while the cast cylinder head incorporates a shaped combustion chamber and attached to the cylinder with four mild steel Phillips head screws. Two of these screws are long and extend down into the crankcase casting to hold the cylinder unit in place and a gasket is fitted for sealing the cylinder flange against the crankcase casting.

Walls of the casting are quite thin, especially in the crankcase bottom itself, but strength appears quite adequate. The main bearing is bushed with a bronze sleeve which is micro-finished to bore size.

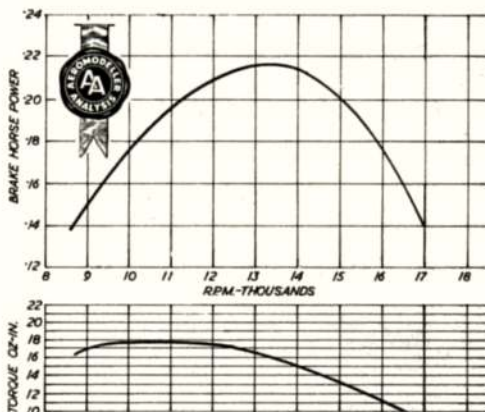
The  $\frac{3}{8}$  in. diameter hardened steel crankshaft steps down sharply to a  $\frac{1}{8}$  in. diameter threaded length, its intake port is cut square and the crank web is machined away in rather elaborate fashion for weight saving and balance. Crank pin diameter is  $\frac{5}{32}$  in. (nominal).

A cast propeller driver locates on three splines machined on the crankshaft and butts right against the main section of the shaft. The shaft at this point does appear a little vulnerable, particularly as it is hardened.



PROPELLER—R.P.M. FIGURES		
Propeller dia. x pitch		r.p.m.
7 x 4 (Frog nylon)		14,250
8 x 4 (Tiger)		13,200
9 x 4 (Trucut)		10,200
8 x 4 (Trucut)		12,800
8 x 3 (Trucut)		13,000
7 x 4 (Trucut)		14,600
7 x 3 (Trucut)		15,800
6 x 3 (Trucut)		16,500
Fuel used: Mercury No. 7		

## Prop speeds and Power curve



Altogether the workmanship and finish of the Fox 15 is excellent and we have nothing but praise for the way in which both the weight and overall size of the engine has been kept to a minimum, consistent with adequate strength and simplicity of design.



## ARMCHAIR AERO- NAUTICS

Author **Derek Piggott** in action at the recent *Gliding Champs*, note that fuselage finish!

by one of the most enthusiastic exponents of R/C in that country. It includes a summary of many internationally-employed transistorised receivers and there are a number of original all-transistorised circuits which have been employed by the author and his friends in a series of power models and gliders. Available in the German language only, unfortunately, it will be a fine reference book for those who understand the lingo.

### RADIO CONTROL EQUIPMENT

GUIDE, 26 page catalogue by World Wide R/C, Oak Park, Michigan, U.S.A., \$1.00.

This complete summary of everything available on the American model market for model R/C is an invaluable reference for the enthusiast, beautifully litho printed on large 11 x 8½ pages, it reveals many hitherto unknown commercial servos and actuators and illustrates hundreds of items (21 different single-channel receivers) rapidly becoming internationally available. Includes helpful articles on installation and a useful key for adaptability of receivers with transmitters of other makes.

GLIDING, by Derek Piggott, 261 pages, 91 illustrations, published by A. and C. Black Ltd., London, W.1, 25s.

We should not be surprised if this becomes the standard handbook for gliding pilots for many years to come. The author is well-known in modelling circles for his pioneering work in control-line aerobatics and participation in the Wakefield Cup team and has been chief flying instructor at the Lasham Gliding Centre for some time. One of the most experienced glider pilots in this country, Derek has the ability of putting over the story of gliding in a non-theoretical manner which is pleasing to read and easy to understand. If you have the yen to go gliding and intend to enjoy one of the many gliding holiday courses operating throughout the country you will not be completely equipped without a copy of this fine book.

SQUADRON HISTORIES: R.F.C., R.N.A.S., and R.A.F. 1912-59—by Peter Lewis. 208 pages, 8½ x 5½ in., 8 litho colour plates. Hard cover, cloth bound, price thirty shillings. Published by Putnam, London, June, 1959.

In a nutshell this new compendium (abridgment, abstract or summary) is a rather expensive thirty bob's worth which falls far short of its splendidly challenging title. Lest author and publisher imagine this to be just one reviewer's jaundiced opinion let it be said without delay that this is also the unanimous opinion of no fewer than nine other writers—all of whom have served in R.A.F. Squadrons and Fleet Air Arm Flights in periods from the 1920's to 1950's.

The first requirement of an abridgment is that it shall be readable—which this presumed reference book is not. The hodge-podge dehydration makes scanning this work a frustrating experience and if the author and publisher claim protection behind the time-honoured gag about "space limitations" then they should not have started in the first place.

The second requirement of a book purporting to be "Squadron Histories" is that it should be just that. There are far too many less-than-six-line "histories" and quite a few like this: "No. 437 Squadron, R.C.A.F. Formed Sept. 1944, as a transport unit with Dakota C.3, C.4 (Z2-OFA.ODD-, ODO-), Anson."

The third requirement of such a telephone directory-like book is that it should present standardised information, or at least credit the reader with some intelligence by stating why information is not available. For example, why should some C.O.s be listed and others ignored? Why should some squadron war histories be quoted virtually in full while others are partly listed? The famous *Tirpitz* episode involving No. 617 Squadron in September, 1944, is not mentioned. Unkindest

cut of all is the complete embargo on Battle Honours and Squadron Mottoes. Unanimous opinion deplors the absence of a single illustration within the text of illustrious and lesser-known Squadron Badges, and regrets the lack of enterprise shown in not providing a Bibliography. And what an incomplete list of Air Min. Specs. (Appendix II) is doing in a book about R.A.F. operational squadrons baffles the reviewer and others.

The 541 histories are crammed into 112 of the 210 pages, leaving one plenty of time to cross-reference (E. & O.E.) happily for many hours with Appendices I-VII. To end on an equally cheerful note, the eight pages of full-colour Fighter Squadron Markings 1922-38-46-59 are first rate. C. W. C.

FERNSTEUERSCHALTUNGEN MIT TRANSISTOREN FÜR FLUGMODELLE, by Helmut Brass, 128 pages, 75 illustrations, price 3.20 DM. Franzis-Verlag, München.

This "Transistorised R/C circuits for aeromodelling" publication has been long-awaited in Germany and has been written

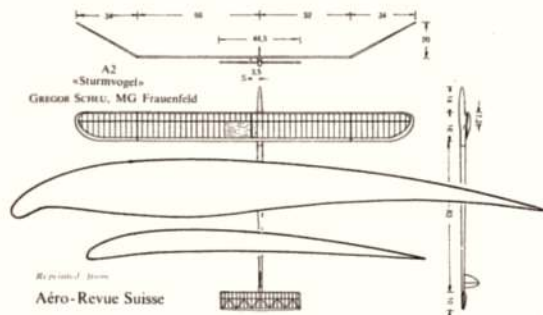
Author **Helmut Brass's Pal, F. Biesterfeld**, the Delta 707 designer built this Skyhog for Stegmaier gear. Span 67 in., 645 sq. in. wing, 5 lb., OS 35 engine, flies like an Astro Hog





From Menton, FRANCE, R. Bardou sent us this action shot of his fibreglass stunt model. Weighing only 27-oz. for 50-in. span, fuselage is an elliptical section tube, wings have balsa ribs set into fibreglass moulded leading edge

THE STORY behind the French take-over of the international rubber championships this year for the Wakefield Cup has been revealed in the May edition of "Modele Reduit d'Avion". It would seem that the organisation of this World Championship is entirely due to the work of one lone enthusiast who has often been a member of the French international teams and competed last year at Cranfield.



Leading SWISS A/2 model in team trials is this asymmetric Thomann design flown by Gregor Scheu. Average in seven flight contests was 2:51, note the airfoil for the mainplane

Marc Cheurlot would not accept the fact that no country would take on organisation of the event this year and approached the Commanding Officer of the American base at Brienne, obtained the co-operation of his local Syndicate d' Initiative and sought sanction

of the Aero Club de France. His enthusiasm has saved the situation. What a pity there is not another Cheurlot to organise a power event!

A new world record is being claimed by Dick Everett of U.S.A. for the radio control distance record. The flight began at Daggett, California, and ended at a previously selected spot near Ludlow on April 12th. Ground speed for the 37-mile flight was 47 m.p.h. and Dick controlled the model from the rear seat of a fast convertible all the way. The model was a conventional high wing 78-inch cabin design and fitted with K & B 19 and five-channel radio. Dick is well-known for his promotion of the hobby to the west coast and has recently concluded his third trip to Japan on behalf of the U.S. Armed Forces. He conducts the Pacific Air Force Model Championships in Japan.

The 10th annual All-India model aircraft rally was run at the beginning of the year on the newly-built I.A.R. runway, Barrackpore. High level officials attending the meeting gave some encouragement for provision of permanent accommodation for the model fliers at the proposed Civil Airport near Calcutta, and even more important there was a consideration that an Indian team should be financed to attend the A/2 World Championships in Belgium. The matter of very high import duty on aeromodelling goods may be reviewed in the near future to help encourage Indian boys to develop technical skill and ability. A.P.S. designs were prominent in this 10th championships, the AEROMODELLER Trophy going to a particularly well-flown A.P.S. "Aquila".



At left, HUNGARIAN record holder, Antal Egri set up 19:31 flight in National competition with 21-in. model. Right, Georges Benedek consults with G. Varszegi, previous record holder at 17:12 and L. Bard. At right, opposite, prizegiving in INDIAN championships forms an impressive array with junior champion, Janak Roy, receiving his trophy



Above, Gerry Ritz of Chicago, U.S.A., with this beautiful A11 at the Miami International Contests, Florida. Model has typical Ritz wing with curved plate section, is sparless with elliptical outlines. At right is the line-up of stunt entries at SOUTH AFRICAN Nationals in Johannesburg at Easter

In Hungary first news of the international indoor championships is that Leif Englund won the small class with over fourteen minutes for Finland and Rieke for West Germany the big class with more than 22 minutes.

This meeting at Debrecen was preceded by the Hungarian championships where 27 competitors took part in a closely-fought event. Best times hovered around the twelve and twenty minutes mark respectively for the two classes and seems surprising that the Hungarian hosts should be beaten in the International on their own ground after so much practice. In free-flight, Hungary has already decided on her three international teams and although power will not now take place it was interesting to see that Frigyes was in both A/2 and F.A.I. power teams. In fact Erno leads the A/2 eliminators, his steady average over the last 20 flights amounting to 2:47. The team to go to Belgium will be Frigyes, Roser, and Radoczi; and for Wakefield, Azor, Benedek, and Krizsma, the same winning team from last year's event at Cranfield.

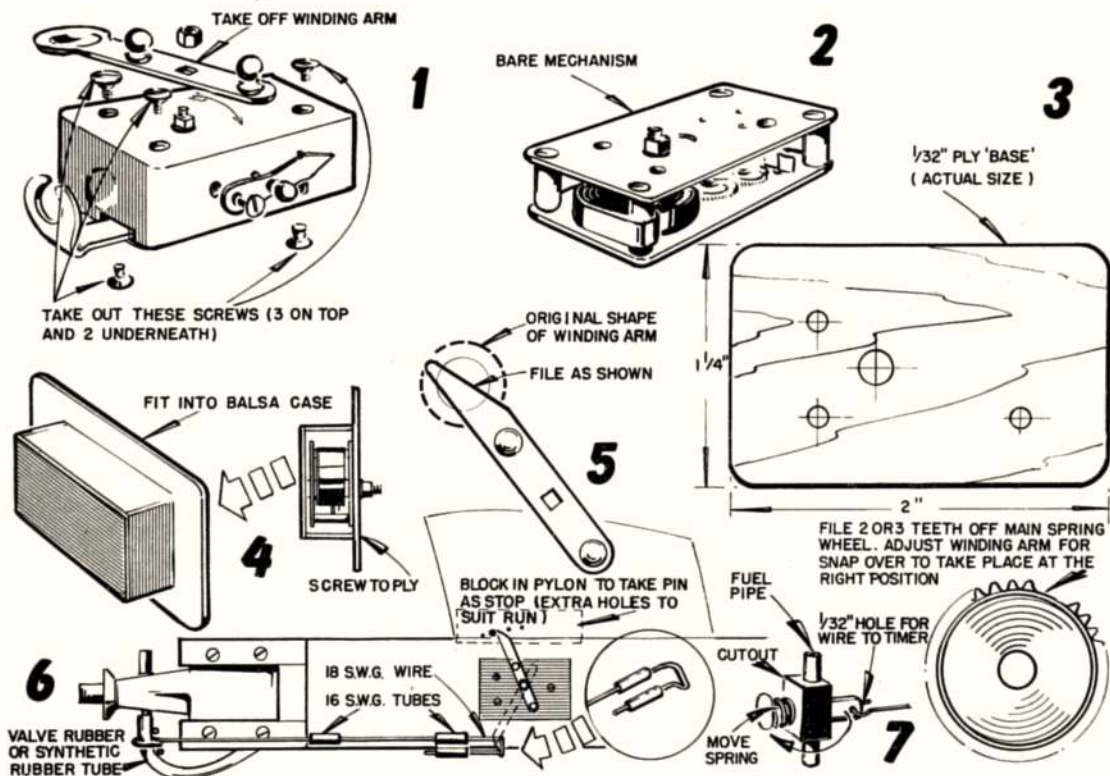
Two refreshing new names appeared at the top of the Swedish annual winter contest in April. Jan Hafstrom led Wakefield with 876 secs. in windy and foggy weather and R. Jansson won A/2 with 829, the renowned Hans Thomann placing third. Club champs are now Malmo, displacing Gamen for a change.

An international control line event is to be held at Basle, Switzerland, over August 29th-30th. The all-class programme includes 5 c.c. team race and "Fox Hunt"—a new name for combat? Entries must be registered by August 20th to Fritz Hodel, Meierweg 62, Riehen/Basle, Switzerland. There are many prizes to be won.



Bob Linn of Los Angeles, U.S.A., was quick off the mark by making this scale Thruxton Paragon, real plane has yet to be flown, model flies beautifully. Below is a mammoth Junkers 87 by Erik Seitz of GERMANY for Kratmo 30 c.c. engine, is nearly 9 ft. span





## Mike Green explains how he modifies the **AUTOKNIPS** TIMER

ONE OF THE MOST frustrating aspects of power duration flying is stopping the motor at the right time! The use of a good clockwork timer takes the ulcers from this side of the business.

The one most readily available is the German *Autoknips* camera timer, which unfortunately cannot be installed in a model without some prior modification. The method described is suitable where a strangler type of cut-out is to be used. It has the advantages that no tricky metal work is required, is neat, and takes only some twenty-odd minutes from start to finish. Incidentally, it does result in a lighter unit.

*A good small screwdriver is necessary. Keep everything free from dirt.*

Proceed as follows: **1** Remove winding arm, catch on side and screws holding cover to mechanism (three on top, two underneath). **2** The clockwork mechanism can now be removed. **3** Next cut out the  $\frac{1}{32}$  in. ply to size and mark and drill the holes accurately. The discarded top cover makes a good template for this. Cement is smeared on the inside of the ply to give protection against the oil that may creep in. Screw the mechanism onto the ply, making sure that the winding shaft has clearance. **4** Box in the works with  $\frac{1}{16}$  in. balsa to prevent entry of dirt. The timer is now ready to fit into the model and can either be screwed or cemented in. The latter is quite in order as the risk of trouble is slight. At this stage the tube guides for the wire strangler can be fitted. It is important to see that the wire will always engage with the arm (as sketch) and not go too far

forward. This is obvious perhaps, but a likely error for a newcomer to power duration work. The winding arm can now be refitted, but first should be suitably filed. **5** It is best held back by a stout pin of 16 or 18 s.w.g. wire, which is pulled out to release. **6** The strangler itself is self explanatory, but care is needed to make sure things do not catch. The wire must be quite free in the guide. Synthetic valve rubber tubing is easily replaceable, but there is still quite a pull on the arm which can tear the rubber. **7** An alternative cutout suggestion, is to alter the commercial units to *pull* off with snap action arranged within the timer by filing a few teeth off the main wheel. This idea is common practice and does no harm to the gears, but the winding arm has to be adjusted so the "snap" comes at the right time.

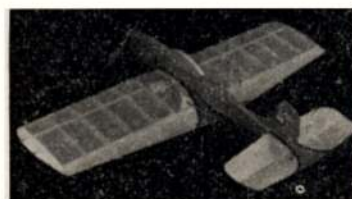
Got any  
**REALLY**  
tough balsa?  
—and any  
old Alarm  
clocks?







*Airfix Freighter made with metal foil covering at left. Speedmaster indicates max speed via pitot pressure and like new light winch, is a Charon product. Profile stunter is Mercury Viper, coming for 1-1.5 c.c., has many smart ideas. Below: OMU 8 Tx with joystick control, sold by Ed. Johnson*



CO-OPERATION between Airfix Ltd. and the Paramount Film Co. has resulted in a nation-wide promotional tie-up of local stockists and cinemas. This is in connection with release of the film "The Buccaneer", now on general circuit throughout Britain. Airfix's H.M.S. *Shannon* kit is typical of the period and makes a fine display to both publicise the film and help the model shops, who would be wise to see local cinema managers if not already approached. On the subject of plastics, a new development soon to reach the shops through Selcol, British moulders of Strombecker models, is the fine range of flying scale plastic, 14 in. to 18 in. span rubber-powered assembly kits. Popular subjects introducing the range are the "Spirit of St. Louis", Ryan Trainer, Piper Pacer and Cub, and the Bird Dog. Space models designed by Dr. Werner Von Braun are another (non-working!) Selcol line new to the British market, and certain to be in demand.

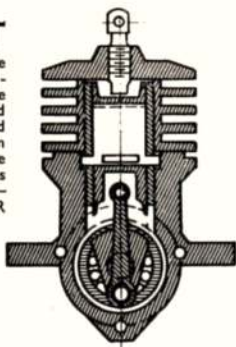
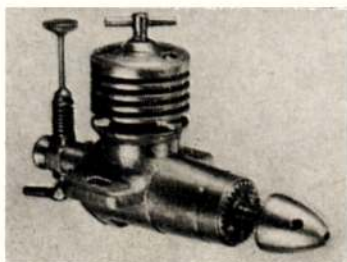
A discovery in the Humber Oil Company laboratory which has resulted in the new formula Humbrol enamel will have a most important effect on our future aeromodelling. In the first place all the gloss colours (18 in all) among the Humbrol enamel range are resistant to glow fuel, and completely diesel fuel proof. Secondly, as may be expected of an enamel, the finish of all 34 colours is claimed superior to cellulose. Thirdly, and most important, the new formula offers weight-saving up to 30 per cent. Tests on two sample squares of tissue, each having three coats of clear dope to shrink, show that the additional coat of colour dope made 9 sq. in. weigh 0.507 grams, and enamel

for the same area, 0.469 grams. Weight of the frame and tissue is taken from these figures to reach the astounding conclusion that whereas colour dope is on average 0.014 grams/sq. in., Humbrol weighs 0.010 for the same area. Imagine what such a saving might be on a Smog Hog fuselage! Add to this the elimination of proofer for gloss colours, and the value is doubly appreciated. Needless to say, the lab is working hard to get the same fuel-proofness in matt enamels: but that's a tough nut to crack, as much as the scale fans would appreciate it.

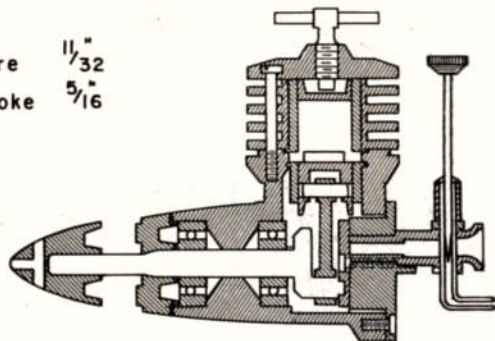
Another new item resulting from a lot of backroom activity is the apparently simple coil-spring Quickstart fitting applied to all new Davies-Charlton engines. There's no doubt about the effectiveness of this simple device which surmounts that hardest of all knacks to learn—the diesel "flick", and we know a lot of beginners will bless its action. Provided the comp setting and needle are near maker's directions, there's fuel in the pipe and the carb has been choked, one cannot fail to get an immediate start—try it and see how it works on the demonstration stand soon to reach D-C dealers. More glad news this month comes from Henry J. Nicholls's announcement of the latest Fred Rising actuators. These well-made low-drain R/C components are now supplied for rubber drive and as a compound unit as well as normal 2-pawl. With compound one can quick-blip a second actuator for fast or slow engine, whilst the rudder is selective, one key for left, blip and key for right, etc. The star wheel delay action is the best we've seen and at 49s. 11d. the compound is cheaper than any other from foreign parts.

## IDEAL ENGINE CONTEST

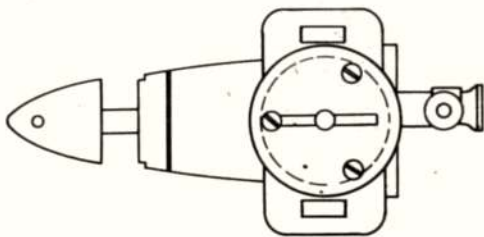
Top honours this month to Mr. V. Dumpe of Carlisle who not only impressed with his drawings for a ball-bearing 0.5 c.c. diesel, but actually sent the engine for a test. Was made on a borrowed watchmaker's old lathe with improvised processes for lapping and drilling but equals any other similar capacity unit in spite of exceeding tolerances in several parts. Note disc valve, thick liner, solid crankcase, stout bearers and balanced crankshaft. Great effort, Mr. Dumpe—you deserve your free supply of AEROMODELLER for one year! (Drawings are actual size.)



Bore  $1\frac{1}{32}$ "  
Stroke  $5\frac{1}{16}$ "



'Point-five BB'  
Made by  
V. Dumpe.





### Woodford

A. V. ROE's Woodford airfield once more provided the venue for one of the north's most lively and varied meetings. Coming, as it does, only two weeks before the Nationals, it is not surprising to find many of our top modellers in attendance, putting that final polish on their technique with new models.

A wet morning did not deter spectators and enthusiasts, more than ever arrived by car, 10,000 in fact! There were 400 competitors compared with 270 in 1958 and many of these, of course, took part in several events.

The larger entry was fairly evenly distributed, but the biggest increase in quality was noted in scale free flight. Incidentally, why no control line scale event? The Nats. prove that as a show stopper, control line scale is equal to radio and the number and quality of such models at Woodford this year would have provided a most interesting event.

After lunch came the sunshine, and the wind, but despite the slow start, all events were completed in time for the 5.30 p.m. prize giving. The customary high quality was again evident in the prize table, which seemed to groan under its cargo of electric drills, soldering irons, kits, leather writing cases, and a host of similar items. Presentations were made by Councillor R. W. Mattinson, J.P., Chairman of Hazel Grove and Bramhall U.D.C. For the first time the rally was sponsored by the *Stockport Advertiser* and the first class attendance bodes well for their future support of this "Little Nats."



### High Wycombe

R.A.F. Booker was the busiest airfield in the Home Counties when Dick Edmonds and his valiant men were hosts to a well-run and generously-prized C/L festival of noise. Despite the furious wind, 160 competitors (including 100 in combat!) had a terrific time in sunny weather. Wharfedale and Bristol were farthest travelled and both clubs returned home with prizes. Most encouraging is the way that F.A.I. size racers have "taken-on" and are rapidly achieving the popularity of the old Class "A".

#### HIGH WYCOMBE RESULTS

##### COMBAT

1. P. Tribe ... Northwood
2. J. Ford ... S. Bristol

##### F.A.I. TEAM RACE

1. G. Yeldham ... Belfairs 5.08
2. J. Williams ... Wimbledon 5.28
3. L. Davy ... Wharfedale 7.01
4. Tyler ... Feltham

##### "B" TEAM RACE

1. J. McNess ... West Essex 7.34
2. T. Whitbread ... West Essex 8.09
3. L. Davy ... Wharfedale 9.59
4. R. Edwards ... Wharfedale 10.15

Round and round they go at A. V. Roe's airfield. Character on the left doesn't seem to be happy with his model!

### STOCKPORT ADVERTISER

#### RESULTS

##### POWER

1. L. Whalley ... Cheadle 6.00+2.41
  2. J. O'Donnell ... Whitefield 6.00+2.40
  3. M. Sutherland ... Tees-side 4.42
- Top Junior**  
J. Kenyon ... East Lincs. 3.00

##### RUBBER

1. B. Picken ... Wigan 6.00
  2. K. Horry ... Bristol and West 5.54
  3. E. Thorpe ... Derby 5.39
- Top Junior**  
B. W. Smith ... English Elec. 6.00

##### GLIDER

1. A. Wiggins ... Leamington 5.42
  2. R. Burgess ... Doncaster 5.28
  3. R. Swindon ... Tees-side 5.23
- Top Junior**  
H. James ... West Brom. 3.21

##### E.J. RIDING SCALE TROPHY

1. C. Abell ... Doncaster
2. K. Harrop ... Congleton

##### R/C RUDDER ONLY

1. E. Johnson ... A.R.C.C.
2. R. Lever ... Leigh

##### R/C MULTI

1. C. Olsen ... A.R.C.C.
2. E. Johnson ... Larkhill

##### C/L TEAM RACE "A"

1. K. Watson ... Thornaby Pathfinders
2. J. Horton ... Wharfedale
3. F. Baxter ... Wharfedale

##### C/L TEAM RACE "B"

1. K. Long ... Wharfedale
2. R. Edwards ... Wharfedale

##### C/L COMBAT

1. R. Travers ... Long Eaton
2. P. Eckersley ... Leigh
3. S. Oldfield ... Macclesfield

##### LADIES' EVENT

1. Mrs. E. Davey ... Blackpool 3.14
2. Mrs. M. Filtness ... Chester 2.49

##### SENIOR RALLY CHAMPION

- J. O'Donnell ... Whitefield

##### JUNIOR RALLY CHAMPION

- B. W. Smith ... English Electric

Left: Open Rubber winner, Wiggins of Leamington, receives his trophy and prize from Councillor Mattinson, J.P., Chairman of Hazelgrove and Bramhall U.D.C. at Woodford. Below: At Lasham, for the opening of the National Gliding Championships (note full size glider airborne in background) Mick Blundell of Godalming shows his O.S.29-powered stunt model. Beautifully finished in royal blue, it unfortunately hit the tarmac rather hard during a demonstration flight in very gusty conditions

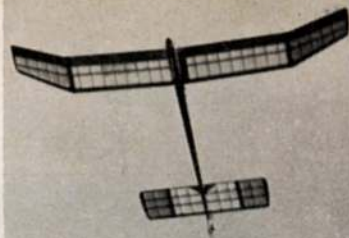




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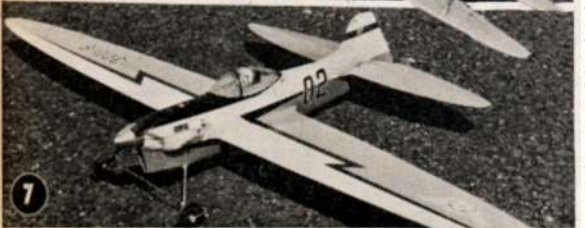
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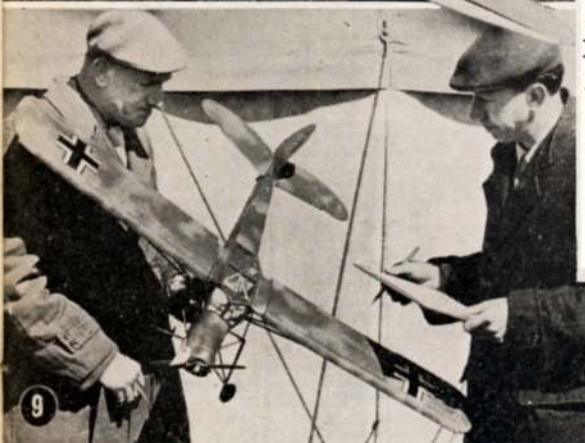


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1. Lady Champion at Woodford, Eileen Davey, holds hubby's 9-oz. Elfin 1.49 48in. Power job, afterwards wrecked by a vandal who stole the engine and timer. 2. Johnny Bronner of Cheadle in open rubber. 3. Snappy launch by Mac Grimmet of West Bromwich. 4. 1st in 1/2 scale Caproni CA-135 by G. Abell of Doncaster. 5. D. Stather of West Hartlepool made this twin A.M.2.5-powered D.H. Rapide control-liner. 6. Winning Class A team racer by J. Watson of Thornaby. 7. F.A.I. racer is one of many elegant Wharfedale examples. 8. "Mac" McNess got his own back when he collected 1st prize at High Wycombe! 9. Nice Fieseler Storch by K. Harrop of Congleton built from A.P.S. drawings, judged by F. Lees and I. Cameron. 10. Woodford power winner Whalley of Cheadle in fly-off against O'Donnell whose time was only one second behind! 11. Belfairs' victorious F.A.I. racer at Wycombe with Hall | Yeldham | Stephens team scowled upon by W. Essex's Chas. Taylor. 12. Novel combat by David Tuttle of Dartford for Miles 3.49



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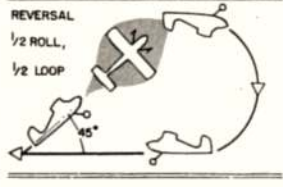
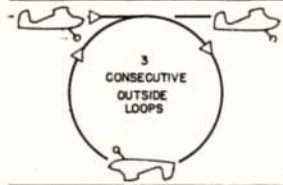
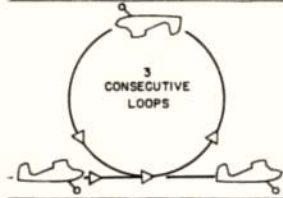
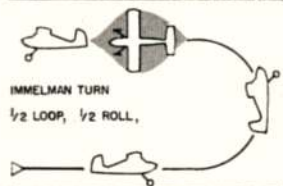
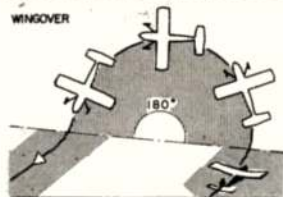
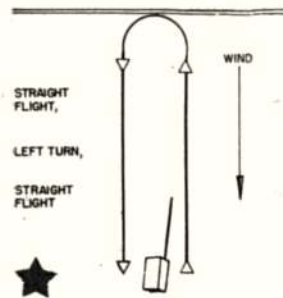
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**F.A.I. Radio Control Regulations**

The following extracts summarise the Schedule of Manoeuvres for International R/C Contests (including the King of the Belgian's Cup).

**5.4 SPECIAL RULES FOR CATEGORY I, MULTI CHANNEL AEROBATICS**

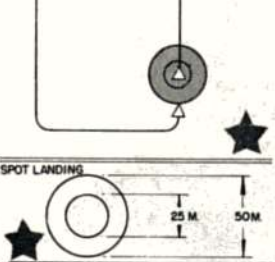
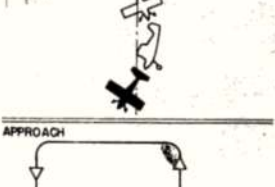
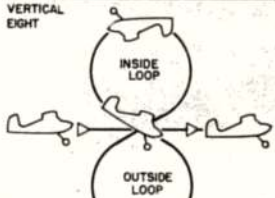
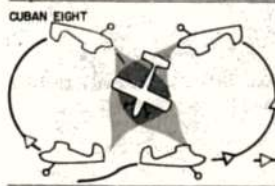
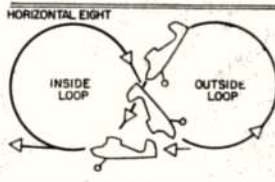
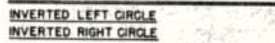
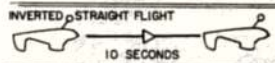
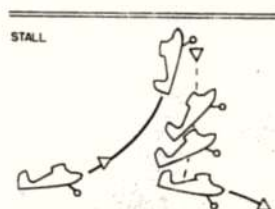
The pilot has 15 minutes in which to carry out the programme of manoeuvres, from the moment he is called to occupy the starting area.

F.A.I. Rule Identification	Rules Description	Points Multiplication Factor
5.4.1	<b>DEPARTURE</b>	
5.4.1.1	Take-off from the ground is obligatory and must be followed by a steady flight into the wind ... ..	K = 5
5.4.2	<b>MANOEUVRES</b>	
5.4.2.1	Flight in a straight line into the wind starting from directly over the transmitter (min. height 10 metres) ...	K = 5
5.4.2.2	Left-hand turn ... ..	K = 5
5.4.2.3	Flight in a straight line ... ..	K = 5
5.4.2.4	Wing-over ... ..	K = 5
5.4.2.5	Immelman turn (1/2 loop followed by 1/2 roll) ... ..	K = 10
5.4.2.6	Loops (superimposed)	
	1st ... ..	K = 4
	2nd consecutive on same axis ...	K = 6
	3rd consecutive on same axis ...	K = 8
5.4.2.7	Inverted loops:	
	1st ... ..	K = 10
	2nd consecutive on the same axis	K = 12
	3rd consecutive on the same axis	K = 14
5.4.2.8	Reversal (or Split S—1/2 roll followed by 1/2 loop) ... ..	K = 12
5.4.2.9	Roll ... ..	K = 8
5.4.2.10	Roll in opposite rotation to 5.4.2.9	K = 15
5.4.2.11	Stall ... ..	K = 10
5.4.2.12	Inverted flight in a straight line—into or against the wind—at a constant altitude for at least 10 secs. ...	K = 14
5.4.2.13	Left-hand circle in inverted flight above the landing circle at constant altitude	
	Min. dia. of circle 50 metres; ...	K = 16
	max. 100 metres ... ..	
	Min. dia. of circle 164 feet; ...	
	max. 328 feet	
5.4.2.14	Right-hand circle in inverted flight (stipulations as 5.4.2.13 above) ...	K = 16
5.4.2.15	Horizontal eight ... ..	K = 13
5.4.2.16	Cuban eight (Savoy knot) ... ..	K = 18
5.4.2.17	Vertical eight ... ..	K = 15
5.4.2.18	Spin (2 turns) ... ..	K = 6
	Spin (3rd turn) ... ..	K = 6
5.4.3.	<b>LANDING MANOEUVRES</b>	
5.4.3.1	Approach in a rectangular circuit ...	K = 10
5.4.3.2	Quality of landing:—	K = 5
5.4.3.3	Precision of landing:—	
	(a) Touch down within a circle 50 metres (164 feet) dia. Quality of landing points x 2.	
	(b) Touch down within a circle 25 metres (82 feet) dia. Quality of landing points x 2.	
	(c) Outside the 50 metre dia. circle zero points.	
5.4.4.	<b>DURATION OF MOTOR RUN</b>	
	The motor or motors must be running during the execution of the programme including the take-off, manoeuvres and the figures.	

**5.5 SPECIAL RULES FOR CATEGORY II, MULTI CHANNEL AEROBATICS (GLIDER)**

The pilot has 15 minutes in which to carry out the programme of manoeuvres, from the moment he is called to occupy the starting area.

5.5.1.	<b>DEPARTURE</b>	
5.5.1.1	Launching of the Glider (cable length 200 metres—656 feet max.) must be followed by straight flight into the wind for at least 10 secs. ... ..	K = 5
5.5.2.	<b>MANOEUVRES</b>	
5.5.2.1	Left-hand turn ... ..	K = 5
5.5.2.2	Straight flight to the transmitter ... ..	K = 5
5.5.2.3	Wing-over ... ..	K = 5



F.A.I. Rule Identification	Rules Description	Points Multiplication Factor
5.5.2.4	Stall ... ..	K = 10
5.5.2.5	Immelman turn ( $\frac{1}{2}$ loop followed by $\frac{1}{2}$ roll) ... ..	K = 10
5.5.2.6	Loops (superimposed):—	
	1st ... ..	K = 6
	2nd consecutive on same axis ... ..	K = 8
5.5.3.	<b>LANDING MANOEUVRES</b>	
5.5.3.1	The approach must terminate in a straight line against the wind ... ..	K = 10
5.5.3.2	Quality of landing ... ..	K = 5
5.5.3.3	Precision of landing:—	
	(a) In 50 metre circle—Quality of landing points x 2.	
	(b) In 25 metre circle—Quality of landing points x 3.	
	(c) Outside the 50 metre circle zero points.	

### 5.6 SPECIAL RULES FOR CATEGORY III, SINGLE CONTROL

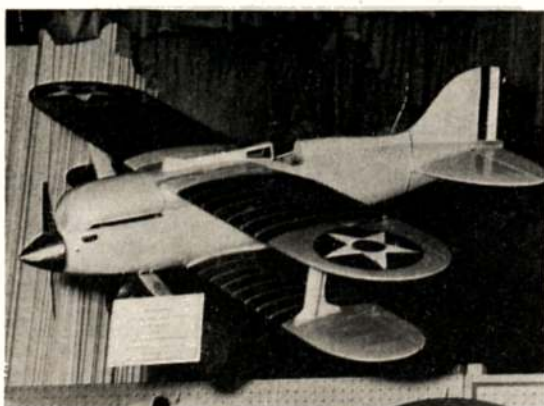
The pilot has ten minutes in which to carry out the programme of manoeuvres, from the moment he is called to occupy the starting area.

5.6.1.	<b>DEPARTURE</b>	
5.6.1.1	Take-off from the ground is obligatory and must be followed by a steady flight into wind. ... ..	K = 5
5.6.2.	<b>MANOEUVRES</b>	
5.6.2.1	Flight in a straight line into wind, starting from directly over the transmitter (min. height 10 metres) ... ..	K = 5
5.6.2.2	Left-hand turn ... ..	K = 5
5.6.2.3	Flight in a straight line down wind back over the transmitter ... ..	K = 5
5.6.2.4	Left-hand circle over the landing circle (min. dia. 50 metres; max. 100 metres) ... ..	K = 6
5.6.2.5	Right-hand circle over the landing circle (min. dia. 50 metres; max. 100 metres) ... ..	K = 6
5.6.2.6	Spiral—two turns ... ..	K = 5
	Spiral—third consecutive turn ... ..	K = 5
5.6.3.	<b>LANDING MANOEUVRES</b>	
5.6.3.1	Approach in a rectangular circuit ... ..	K = 10
5.6.3.2	Quality of landing ... ..	K = 5
5.6.3.3	Precision of landing:—	
	(a) In 50 metre circle—Quality of landing points x 2.	
	(b) In 25 metre circle—Quality of landing points x 3.	
	(c) Outside the 50 metre circle zero points.	
5.6.4.	<b>DURATION OF MOTOR RUN</b>	
	The motor or motors must be running during the whole of the execution of the manoeuvres covered in Section 1 and 2 of the list of manoeuvres above.	

### 5.7 SPECIAL RULES FOR CATEGORY IV, SINGLE CONTROL (GLIDER)

The pilot has 10 minutes in which to carry out the programme of manoeuvres from the moment he is called to occupy the starting area.

5.7.1.	<b>DEPARTURE</b>	
5.7.1.1	Launching of the Glider (cable length 200 metres-656 feet—max.) must be followed by a straight flight into wind of at least 10 seconds. ... ..	K = 5
5.7.2.	<b>MANOEUVRES</b>	
5.7.2.1	Left-hand turn ... ..	K = 5
5.7.2.2	Straight flight to the transmitter ... ..	K = 5
5.7.2.3	Left-hand turn ... ..	K = 5
5.7.2.4	Right-hand turn ... ..	K = 2
5.7.2.5	Spiral 1st turn ... ..	K = 3
5.7.3.	<b>LANDING MANOEUVRES</b>	
5.7.3.1	The approach must terminate in a straight line against the wind ... ..	K = 10
5.7.3.2	Quality of landing ... ..	K = 5
5.7.3.3	Precision of landing:—	
	(a) In 50 metre circle—Quality of landing points x 2.	
	(b) In 25 metre circle—Quality of landing points x 3.	
	(c) Outside the 50 metre circle zero points.	



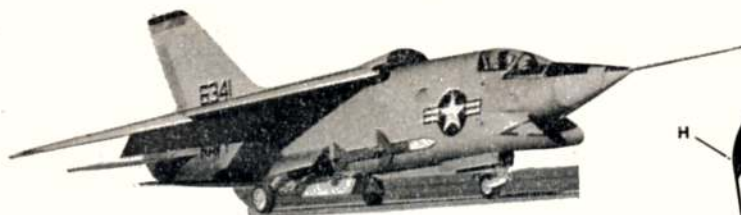
## OUTSTANDING R/C MODELS AT LOS ANGELES HOBBY SHOW

GRANGER WILLIAMS is a windtunnel modeller and a pioneer member of the FAST club responsible for originating team racing, and it seems as though his skills will spark off a fresh line of thought for R/C pylon racing. Above is his venture into 8-channel (Orbit) in the form of a 6-lb., 48-in., K and B 29 Curtiss Racer, complete in every scale detail with many moulded parts and boasting an airspeed of 100 m.p.h. Bob Dunham test flew it for Granger at the Larks meeting on April 5th, and after a hectic twilight take-off in which the normally placid Dunham was wiggling like Elvis Presley, the Racer proved so hot it flew o.o.s. during high speed wide turns. Everyone was gulping to replace lost oxygen as the Racer cut for a feather-like landing with aileron, rudder and engine controls nursing it down on a 65 m.p.h. glide. Further flights have been just as exciting.

Other radically new model seen was the Trident (below), a 66-in., 830 sq. in., 4½-lb. all-fabricated plastic and aluminium airframe retailing at \$59.95. High impact thermoplastic skins are welded to the ally frame, and the design is advanced to the extent that flaps as well as ailerons are fitted on the NACA 43015 section wing. The long cockpit canopy removes to allow free access to a large equipment compartment, and the shock-absorbing undercarriage is neatly "trousered" in the adjustable angle wing.

After these two hot-rods—anyone for tennis?





## AEROPLANE IN OUTLINE No. 58

### Chance Vought F8U-3 Crusader

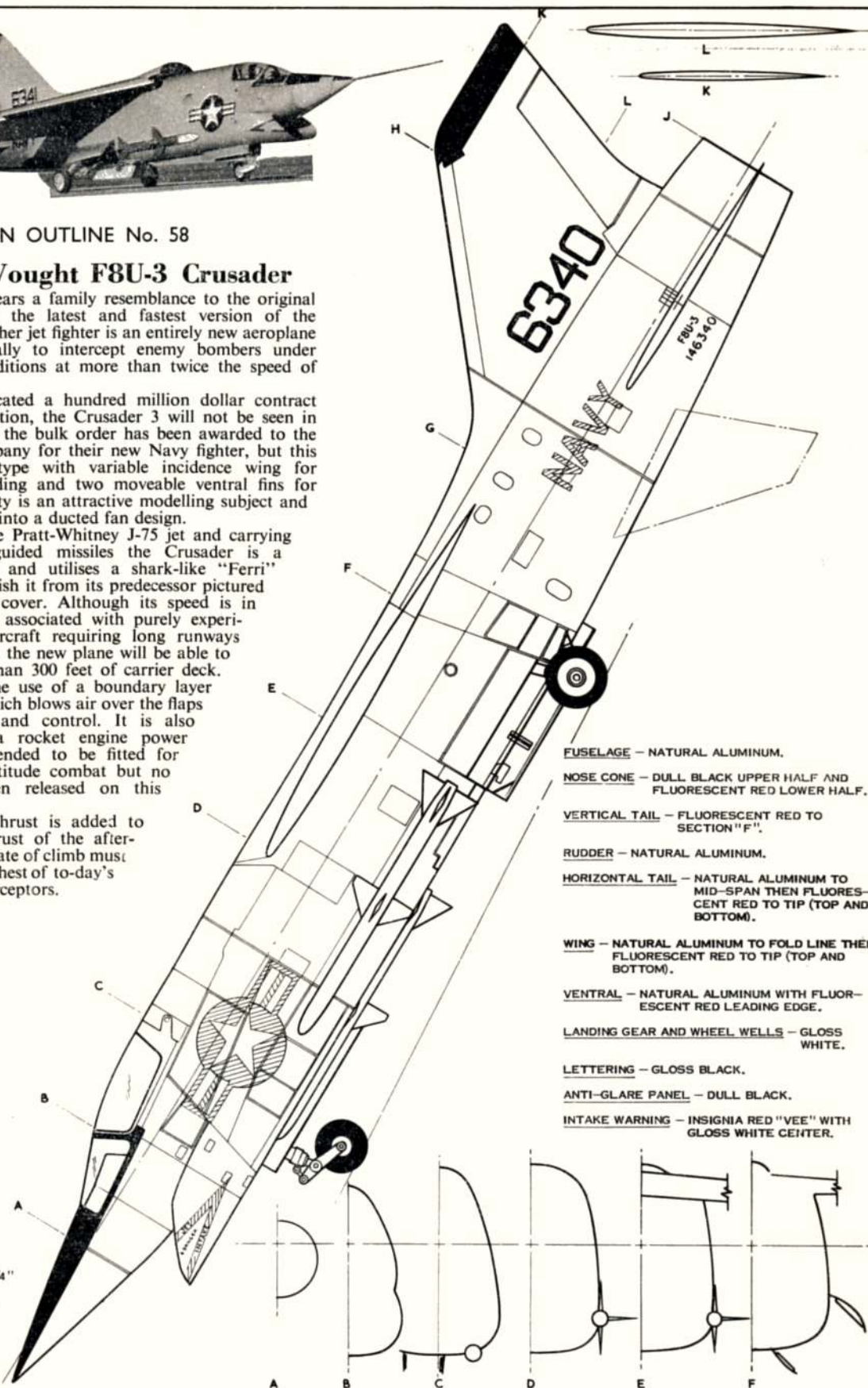
ALTHOUGH it bears a family resemblance to the original F8U-1 Crusader, the latest and fastest version of the advanced all-weather jet fighter is an entirely new aeroplane designed specifically to intercept enemy bombers under any weather conditions at more than twice the speed of sound.

Originally allocated a hundred million dollar contract for initial production, the Crusader 3 will not be seen in great numbers as the bulk order has been awarded to the McDonnell Company for their new Navy fighter, but this interesting prototype with variable incidence wing for take-off and landing and two moveable ventral fins for high speed stability is an attractive modelling subject and would well make into a ducted fan design.

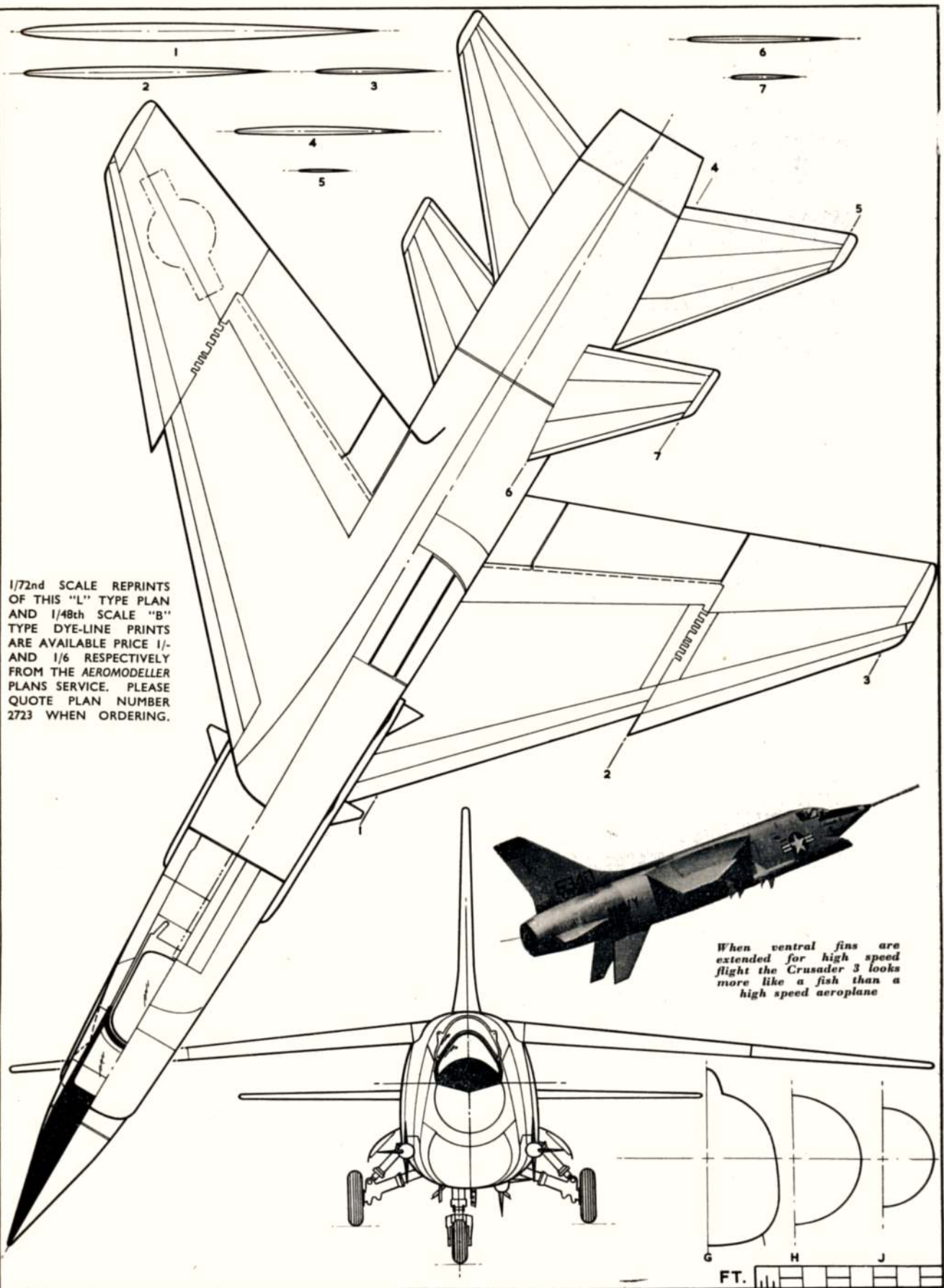
Powered by the Pratt-Whitney J-75 jet and carrying three Sparrow guided missiles the Crusader is a colourful subject and utilises a shark-like "Ferri" intake to distinguish it from its predecessor pictured on this month's cover. Although its speed is in the range usually associated with purely experimental rocket aircraft requiring long runways on which to land, the new plane will be able to operate on less than 300 feet of carrier deck. This is due to the use of a boundary layer control system which blows air over the flaps to improve lift and control. It is also rumoured that a rocket engine power package was intended to be fitted for climb to high altitude combat but no details have been released on this subject.

When rocket thrust is added to the 26,000 lb. thrust of the after-burning J-75 the rate of climb must be among the highest of to-day's single seater interceptors.

SPAN - 39' - 11 1/2"  
 LENGTH - 55' - 11 3/4"  
 HEIGHT - 16' - 4 1/2"



- FUSELAGE - NATURAL ALUMINUM.
- NOSE CONE - DULL BLACK UPPER HALF AND FLUORESCENT RED LOWER HALF.
- VERTICAL TAIL - FLUORESCENT RED TO SECTION "F".
- RUDDER - NATURAL ALUMINUM.
- HORIZONTAL TAIL - NATURAL ALUMINUM TO MID-SPAN THEN FLUORESCENT RED TO TIP (TOP AND BOTTOM).
- WING - NATURAL ALUMINUM TO FOLD LINE THEN FLUORESCENT RED TO TIP (TOP AND BOTTOM).
- VENTRAL - NATURAL ALUMINUM WITH FLUORESCENT RED LEADING EDGE.
- LANDING GEAR AND WHEEL WELLS - GLOSS WHITE.
- LETTERING - GLOSS BLACK.
- ANTI-GLARE PANEL - DULL BLACK.
- INTAKE WARNING - INSIGNIA RED "VEE" WITH GLOSS WHITE CENTER.



1/72nd SCALE REPRINTS OF THIS "L" TYPE PLAN AND 1/48th SCALE "B" TYPE DYE-LINE PRINTS ARE AVAILABLE PRICE 1/- AND 1/6 RESPECTIVELY FROM THE AEROMODELLER PLANS SERVICE. PLEASE QUOTE PLAN NUMBER 2723 WHEN ORDERING.

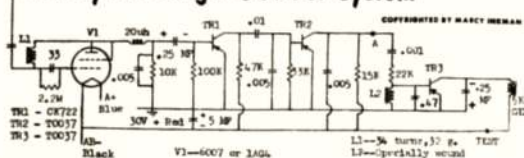
*When ventral fins are extended for high speed flight the Crusader 3 looks more like a fish than a high speed aeroplane*

FT.



## Radio Review

### MaRCytone Single Channel System

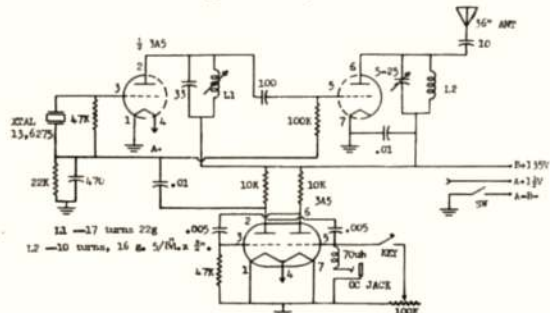


**Transmitter:**  
*Hand held, case 3 x 5½ x 8 in. Light Alloy.*  
 3A5 Multivibrator tone osc. 3A5 Xtal osc. and power doubler.  
 Output frequency 27,255 Kc/s, Xtal frequency 13,627.5 Kc/s.  
 Controls: TX on/off Tone frequency potentiometer, tone press button, P.A. tuning capacitor.  
 Output indication: Torch bulb.  
 L.T. 1.4V nominal at 440 mA (Battery No. AD-A).  
 H.T. 2 x 67½V (Battery No. B101) at:  
     15 mA carrier.  
     19 mA Tone on.  
 Works on single 45V with reduced range.

**Receiver:**  
*Case 1½ x 2½ x 3 in. Clear plastic.*  
 Slug tuning. Aerial length 18 in. - 36 in. One valve type 1A6G4.  
 One CK722 and two 0037 transistors. 5K Gem Relay.  
 Weight 3 oz. including case.  
 L.T. 1.4V min. 1.2V on load.  
 H.T. 30V min. 24V on load.  
 Idle current 1.0mA TX on 1.2mA TX off.  
 True tone current 5 - 6 mA (relay operates).

**Suppliers:**  
 Ace Radio Control, Box 301, Higginsville, Missouri, Rx Kit \$17-95, Tx Kit \$18-95.  
**Designer:** Marcy Inkmann.

Step-by-step instructions are quite easy to follow. However, it should not be recommended to the absolute tyro, but anyone who can handle a soldering iron and has built one or two Rx's before should have no difficulty. A knowledge of the colour code is assumed. The circuit is just about as simple as can be made. It consists of a "tuned anode tuned grid", oscillator with the Xtal forming the grid tuning circuit using one half of a 3A5, operating at the crystal frequency of 13,627.5 Kc/s. The other half of the valve being used as a power doubler which does not require neutralizing, but effectively isolates the oscillator from the aerial, making it insensitive to changes in aerial loading (with Tx using overtone Xtal oscillators coupled direct to the aerial, these changes can cause the oscillators to pack up or operate uncontrolled at other than the correct frequency, and the apparatus required to check for correct operation will not generally be available to the average modeller.)



Setting up was carried out as laid down in the instructions and no difficulty was experienced. The lamp indicator, while crude and an absorber of an appreciable part of the Tx output power is a simple and effective device and the Tx output tuning-in readily set to suit the particular aerial length used. One resistor of the wrong value was supplied and this was replaced. No spring or shakeproof washers were supplied and these were fitted where necessary. The Xtal holder, being ceramic, should definitely have a spring washer. It is particularly useful to avoid soldering until *all* the components are in position and to assemble the chassis to the panel before soldering in the tuning capacitor, so that its alignment with the hole in the case can be checked, also that it is the right way round so that a metal tuning screwdriver may be used without hand capacity effects.

Note an insulated screwdriver should be used as although the capacitor will be the earth as far as R.F. is concerned, there will be the full H.T. on the metal part—hence the insulating grommet. With wet hands 135V can be lethal so keep hand on the insulated handle! The usual knitting needle or insulator screwdriver is not man enough to turn the capacitor. Takes two evenings to build at leisurely pace.

### Receiver

The wire ends should be inserted in the base eyelets and bent over to hold the components in and only clipped off *after* soldering.

The Rx was checked again after soldering (use heat sinks made of copper strip clamped to Tr leads by crocodile clips.) Rx was easily tuned to Tx radio frequency by tuning for dead space while listening on H.R. 'phones connected to point shown in circuit.

An attempt was made to tune the Tx Audio note to the Rx filter frequency and the fun started. A peak could be obtained in the relay circuit but only about 2 mA and not enough to operate the relay. The Tx note tuning was touchy—not surprising as the 100K pot had to be adjusted to a value of only 2K to get the required note! With this low value it was thought that the modulation depth was probably too low to give proper operation of the Rx, so that two 0.005 mF capacitors were changed for 0.001 and the opposite grid resistor reduced from 47K and 22K. This gave the desired frequency with a reasonable value for the setting of the 100K pot, but still no full current rise. On listening to the note as it was varied it was observed that the receiver seemed incapable of reproducing the high note required at full strength. Attempts to make it do so by raising the quench frequency by reducing the grid resistor of the valve proved of no avail. The filter assembly was then replaced by an equivalent pot core filter and the set worked perfectly. The filter was then replaced by a 2.2K resistor and the Rx again worked, but, of course, responded to the full range of notes from the Tx. The filter frequency was then checked, found to be 4.8 Kc/s and reduced to 2.8 Kc/s by adding further turns to the coil. The 0.005 capacitors were replaced in the Tx and everything worked perfectly.

The Rx will only respond sufficiently to operate the relay to a Tx modulated by an audio tone 2.8 Kc/s ± 100 c/s and is thus not affected by "reed" transmitters, although the carrier from these if stronger, i.e., nearer, can "blot out" the signal from its own Tx.

It follows perfectly up to 8 c/s, the highest frequency available, and it should be capable of resolving mark/space signals up to 12 c/s or more. Range is ample and the filter band width allows for transmitter drift. Ace Radio have already eliminated the problems mentioned with current production kit revisions.

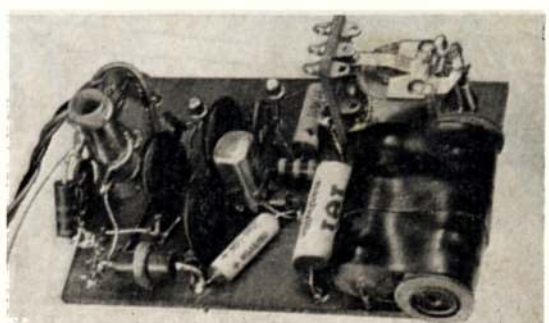
Marcy filters use a ferrite tube for winding to the coil. 1½ in. x ½ in. diameter. Nearest British type is Mullard FX 1135/A1 (same size).

All coils are tuned with 0.5 mF paper capacitors 100V or 150V working. Windings are in layers of 30 s.w.g. enamelled with different frequencies. Due to component tolerance, final adjustment to frequency is made by removing turns so wind on a spare layer.

Freq. C/S	Approx. number of layers
5,400	3
4,200	4
3,500	5
3,000	6
2,500	7
1,400	9

DAVID MCQUE.

*Topside of Rx shows diminutive T0037 transistors, and special Marcy filter. Receiver circuit at left.*





S.M.A.E. PUBLIC Relations Officer Ken Brookes, tells me that no less than 168 modelling Clubs were represented at our superb Nationals. All I can say is, thank goodness you don't all send in reports for his column—we would need to take up all the AEROMODELLER pages with your news! As things are, it's a tough task giving all of you a say—so please keep it brief and informative in those monthly bulletins.

### South Eastern

Four years of continuous development in producing a small compass unit for A/2 size fuselages has at last resulted in success for Grahame Gates of SOUTHERN CROSS A.C. A new British hand launch glider record of 16:04 was established in February and is likely to be the first of many new claims if I know the Southern Cross boys.

**EAST GRINSTEAD M.F.C.** Secretary Les Fuzzard is highly delighted that clubster Geoff Kemp, has given him his A.P.S. *Leprechaun* glider. This actual model apparently caused quite a stir while Mr. Kemp was in South Africa a few years back, when it made a flight of 1 hour 40 minutes and hit the newspaper headlines.

**NORTH KENT NOMADS** have been approached by the Television Newsreel Film Unit to put on a demonstration of point-to-point flying by radio for their benefit, and hope to do the same towards the end of the flying season.

### Southern

**EASTBOURNE** is growing fast and at present has 38 members. Two trips to Area meetings have already been attended and 20 attended the Nationals, where Ron Moss flew his *Dornier* 215 twin to success.

Interest in competition flying has increased considerably in **HORSHAM AND D.M.A.C.** since last season—free flight predominating. Several members have obtained Japanese clockwork timers and are currently flying *Calypso's*, *Eureka's* and a *Dream Weaver*. They have a canteen in the club room at Needles Estate, Horsham, where coffee, cheese rolls, hot dogs, etc., can be obtained at weekly meetings on every Friday at 7.30 p.m. Interested modellers in the district would be welcome.

**BRIGHTON** were well represented at the Nationals and yet once more the Thurston Glider Trophy goes in their direction, this time to hard-working Fred Boxall. The lads were disappointed that the Power Champs. should be cancelled this year—John West topped the Area Elims. with 13:04.

The Southern area and West Hants Rally is to be held at Beaulieu Aerodrome on September 27th, events are:—

Open Power, Rubber, Glider,  $\frac{1}{2}$ A, A, B, Team Races.

Combat (entrance 2s. 6d.), the "West Hants. Trophy" for Radio Control and the S.R.D.E. Trophy for best team in Team Race. Pre-entry is necessary for Team Race and Combat only, closing date September 20th, entries to J. S. Hitchcock, "Russells", Arne Road, Wareham, Dorset.

After six months of life the **REIGATE AND DISTRICT M.A.C.** is well under way, a A/1 Glider contest is being arranged. Any active modellers, particularly seniors, are invited to attend at the Congregational Church Hall, High Street, Reigate, on alternate Fridays, including June 19th from 7.30 to 10 p.m.

### London

**COSMO A.M.C.** held its annual prize-giving on Friday April 17th, approximately 100 guests and members attending and enjoying the display of models. Eddie Cosh was guest of honour and presented the prizes to club champion S. Robinson, who did so well in the R.A.F.M.A.A. Championships. Other cup winners were R. Morley and C. Gardner and certificates of Merit were awarded to P. Greenhalgh, C. Bairley, E. Jackett and T. A. Wellbelove.

**WALTHAMSTOW** requires members and offers facilities for indoor R.T.P. flying

## CLUB NEWS

and a large field for Sunday morning flying. Meetings on Friday evenings from 7.00 at George Gascoigne School, Queens Road, Walthamstow, E.17.

**DULWICH M.F.C.** recently held its first film show, and it marks the beginning of an expansion programme. By the time this appears in print the club will have started construction of a free flight S6B. All members will be helping in its construction including the juniors, the club being divided into teams consisting of seniors and juniors—each team dealing with a particular component.

**HAYES M.A.C.** have started the season better than usual. Jim Baguley is second in the area power, but alas—no trials. Josh Marshall is third in Wakefield and Brian Chapman fifth in A/2, both with one eliminator to go. In C/L at Dagenham back at Easter, Brian Greenaway got into the final of the Class B combat, but a blocked vent put him on his 130 c.c. chicken hopper stunt tank, put him out of the running. Definitely a case of dried-up chick.

**ENFIELD & D. Club Secretary** would very much like to hear from anyone who has any experience of compressed air motors for R.T.P. flying, or who knows where such a motor is available. They have been developing jets powered by compressed air, but now want something that makes a noise and looks a little more spectacular. Also on the spectacular scale is a rumour of a D.H. Mosquito being built for a pair of Ray Tuthill's class "B" motors. The designers hope to get at least 100 m.p.h. out of it.

**CROYDON D.M.A.C.** now meets on Epsom Downs on Friday evenings as well as the normal Tuesday meeting. In the A/2 eliminators, Den Partridge proxy flew John Blounts model to a higher total than he could manage himself—very frustrating! The club now has four I.M.A. ("Frog") employees as members, a nice change to see trade people taking an active part.

J. Turner of **TOLWORTH D.M.A.C.** flying his hastily repaired Miles 3 $\frac{1}{2}$  powered model in combat at the High Wycombe C/L Rally, upheld Miles prestige after keen rivalry by beating the "Rivers 3 $\frac{1}{2}$ " team, only to be beaten himself in the 5th heat. Members new to C/L flying are now being taught on "Miles 3 $\frac{1}{2}$ " powered "Rogues"! If they can tame that combination they should be able to fly anything.

**DAGENHAM M.A.C.** had their share of travel risks when the way to High Wycombe, but thanks to friendly fliers, got to the meeting in due course. Chris Redgrove sat and watched the "A" final, oblivious to the fact that he should have been flying in it! But he doesn't do that again!

### Western

The five members of the **BRISTOL BLOODHOUNDS** combat team (members of South Bristol and Bristol aces) placed second, fifth, and fifth at High Wycombe. George Ford placing second and they offer congratulations to Mr. Tribe on winning—well said Bristolians.

Fourteen members of **WESTON** controllers attended the Nationals and all enjoyed themselves. Three members entered in the combat, Ray Johns getting into the third round, and Pete Heeley and Roy Burgess both got into the quarter finals. Pete drew level with Kendrick (last year's winner) in the quarter finals, but due to a tank split in the refly, eventually lost.

### East Midland

**GRANTHAM AND D.M.A.S.** is a newly formed society from the remains of the old "Grantham Society of Model Engineers". Enquiries should be sent to A. H. Percival, Red Berry Cottage, Barrowby, Grantham.

### South Midland

**HATFIELD M.A.C.** membership has fallen lately and the loss of D. Benson, who

has done so much for the club and who has now emigrated to Australia, is very much felt, so new members especially seniors, are always welcome from the Welyun Garden City and Hatfield district at the clubroom in Hatfield Youth Centre, The Breaks, French Horn Lane, Hatfield. There is a stock of the basic building materials, plenty of building space and the finest flying field in the area.

Although newly formed the **MARTYRS (OXFORD)** club has enjoyed promising success in contests. At Blackheath Winter gala, all four entrants in power placed in the top half dozen. Junior Derek Wain's "Dream Weaver" proved its worth by placing sixth in the Halifax and another up and coming Junior, Albert Fathers, came out top at the F.A.I. Elims. only dropping 15 sec. in five maxes.

About a dozen **HODDESDON M.A.C.** members went to High Wycombe by various means and thoroughly enjoyed a good day's flying. Five entered combat and as this was their first attempt at competition flying, three seconds and one third round placings was not too bad. Any lone modeller can contact them at the "Maypole", Hoddesdon, from 7.30-8.30 p.m. any Wednesday night.

In **NORTHAMPTON M.A.C.** there has been a flood of "Ebenezers". These all sheet biplanes have a violent and uncontrollable flight pattern ending in a rapid spiral dive, but are practically indestructible. For 18 months Bill Ingram was building his Fox 35 powered *Thunderbolt*, then he tested it and soon after, broke his leg in a motor cycle accident so he'll have to wait a little longer. Tough luck!

### East Anglia

$\frac{1}{2}$ A combat is still being flown enthusiastically in **CAMBRIDGE M.A.C.** by junior members in particular, A.M.15's and Frog 150R's being used mainly, though a Mills 1.3 with a sixteen-minute tank turned up at the last session!

Barry Halford, leading all round competitor of **NORWICH M.A.C.**, goes through to the trials with his own brand of A/2 witchcraft. Pretty East Anglian young ladies and glorious spring weather have caused a serious gap in the teen and twenty age group of the club. Fast developing good contest technique, half a dozen keen youngsters look like filling this gap for the summer control line displays. More senior members and visiting service modellers will be welcomed at the fortnightly meetings held in the Civil Service Club, St. Giles Street. Phone: Tony Finucane on Norwich 27405 for details.

I regret to announce that the **LAINDON** Controlline Rally had to be cancelled because of the inability to find a flying field. The notice in last month's issue could not be stopped in time to prevent visitors making a fruitless journey.

### Northern

**WHARFEDALE AND D. AEROMODELLERS** made their way out of Leeds at 5 a.m. to visit the High Wycombe C/L Rally. Results of the long trek were not disappointing as L. Davy took third place in both F.A.I. and Class B with R. Edwards taking fourth place in Class B. They want to thank "Dick" and his men for a very enjoyable competition. The 3rd May saw the club turned out in force at the Avro Aircraft works for the *Stockport Advertiser* meeting, where B. Truner attained 2nd Junior in glider duration and J. Horton and F. Baxter took 2nd and 3rd place respectively in Class "A". The Class "B" final was an achievement in itself, being composed entirely of Wharfedale teams, so many in fact, that one model had to have a pilot and crew from Thornaby friends, who did a great job.

The organisers did not apparently realise the danger during the Class "B" event. Wing tips of the models were at times only one foot from the spectators. This resulted in L. Davy's model being brought down by a young onlooker at around 100 m.p.h., luckily no serious damage was done to the boy but it could have been worse.

## North Western

The highlight for the EAST LAN-CASHIRE M.A.C. contest fliers during the past few weeks was undoubtedly the holding of the power and the Wakefield Elims., for the N.W. Area on their club flying field.

Conditions throughout the day were really something to write home about. Fly-off time in the Wakefield Comp. was 28 min. 27 sec. O.O.S.! This by Brian Pictou of Wigan. One junior, Clive Kenyon, flying a new model with Enya 15D, on a test flight, clocked 30 : 34 O.O.S.!

Thanks to the kindness of Mr. E. Wilding, a local businessman, WIGAN M.A.C. can now once again enjoy control line flying under good conditions. Mr. Wilding allows members to use two circles which are in his own grounds and therefore relatively free from interference. Taking advantage of this generous offer, Tony Bullough and Eric Tomlinson, have got the enthusiasts together in an effort to put Combat on its feet, with much better organisation than has been experienced before.

Mr. Wilding is himself an aeromodeller, with his interest centred mainly on Radio Control, and is to be heartily congratulated on progressing so quickly to the stage of having two "Matadors" flying, one on single channel and one on a pulse system of the Galloping Ghost type, and having a

"Taplin Twin" powered "Smog Hog" fitted with his own constructed 6-reed outfit, just about ready to take the air.

The exhibition given during March by CHEADLE D.M.A.S. went off well with the assistance of the I.R.C.M.S. At the Northern Models Exhibition, Cheadle won quite a fair percentage of the places including the AEROMODELLER Cup, which stays in Cheadle for the third year in succession. It was won by Arthur Bailey, who also won the Power model class. Wally Neild won the Radio class. On a date provisionally fixed as the Sunday, August 2nd, Bank Holiday week-end, Cheadle will be sponsoring an open control line day for Combat and Stunt. The stunt to be judged by the N.W. Area C/L sub-committee. The venue to be in Cheadle though to be fixed more accurately later. Entries 1s. 6d. to L. Whalley, 45 Cranleigh Drive, Cheadle, Cheshire.

## Midland

THE MIDLANDERS held their annual Jetex, chuck glider and rubber event during Easter. M. Ashcroft winning the chuck glider cup followed by R. Wadsworth, who won rubber and T. West won Jetex for the second year running. The club has an enterprising journal with helpful articles and the type of gen that maintains club interest.

BRIERLEY HILL AERONAUTS heavy-weight flyers, Messrs. Wilkinson and Webb, have finally got the F.A.I. power duration "bug" out of their systems the hard way at the area Elims. at R.A.F. Wellesbourne. Club treasurer Mick Wilkinson, crashed both his models and secretary Cliff Webb wrote off his modified Dream Weaver. They were in good company. British team man John Bickerstaffe, wrote off his Enya 15D model and Area Secretary Dennis Illsley, joined him with the remains of his P.A.W. job, such were conditions.

SUTTON COLDFIELD R.C.M.A.C. has made steady progress. Fortnightly meetings have been well attended, with John White-stone doing excellent work with the tea pot. Dennis Thumpston flew away in our first club contest held in blustery conditions on April 18th, and surprised some good lady at her knitting a couple of miles from the second racing pylon.

LONG EATON AND D.M.A.C. visited the Woodford rally and R. Travers won the combat event. A club catering manager has again been elected and his main job is to provide the rest of the club with a cup of tea on club nights, he also arranges refreshment on our trips to rallies, but his job is hampered by the lack of volunteers to wash up on a club night. Shame!

With four out of the five LEAMINGTON M.A.C. entrants having been eliminated from the A/2 Trials, interest will now be centred on the Wakefield class, where the same five entrants have all qualified. Ted Wiggins made his journey to Woodford worthwhile, by winning the glider contest, for which the prize was a useful travelling clock. After making four maxes, in the Weston, Eric Barnacle slipped up with a 2.10 last flight. A little later he made a worse slip, when in trying to retrieve a model, he fell 30 ft. out of a tree and damaged his spine. He is out and about again now, wearing the very latest thing in plaster jackets—it's a hard one too! Practically bullet-proof!

At the second of the Area Control line championship meetings, the OUTLAWS (CANNOCK) M.A.C. lads ran combat and set up what must be a record for this event by finishing in 44 hours flat including a one-hour lunch break. In between time Roy Lockley took time off to place 3rd in stunt. It is unfortunate that the Gee Dee M.A.C. have been conspicuous only by their absence at this and previous meetings, as Outlaws would be very interested to know by what strange quirk of the imagination the five clubs attending their private rally constitutes more than the average 15-20 clubs at Area meetings. (See May Club News.)

A fortnight later at Woodford, Gordon Bentley placed 4th in combat. At this

meeting a P.A.W. 2.5 was stolen by some light-fingered miscreant and the entire nose smashed off a prospective Gold Trophy job, to get it. T'would be appreciated if eyes could be kept skinned for a P.A.W. with an alloy prop. nut and 1/2 in. cut off the end of the shaft.

Wakey Wakey LEICESTER M.A.C. members—your Committee is after you for better support. As they say in the latest newsheet, you only get something out of the club for whatever you put into it, so its up to you members to get the L.M.A.C. moving.

## Services

KHORMAKSAR M.A.C. in Aden is an active club there, though due to geographical and climatic conditions, they fly control line mainly. Interest at the moment is centred on the club room members are building as our last one was blown up to make way for a new runway!

Just in case anyone wants to emigrate, here are the prices of motors on sale there. Enya 15d's £3 5s. 0d. PAW Specials £4 5s. 0d. O.S. Max. II 15 R/C 15 £3 5s. 0d. O.S. Type II Pulse Jets £4 5s. 0d., etc.

## South Wales

At the South Wales A.G.M., steps for its reorganisation were taken. Mr. Frank Holland retired from the chair. He has been an inspiration in past years and spent a great deal of money on the area. His successor is Peter T. Waters and Viv Davies continues as the trusty secretary. It was decided to hold an Area contest at Clyn Common the next day. On the morning, brisk thermals snatched up an A/2 with a faulty D.T. but where were the timekeepers? Considering the area's position, attendance was good and everybody enjoyed themselves. The next area meeting is on Saturday, May 23rd, at Dyffryn Grammar School and all interested parties are welcome as the clubs in the area are short of aeromodellers.

PORT TALBOT M.A.C. competition policy seems to be paying at Area Contests. At the meeting mentioned above, they cleaned up the Glider, Power, and Combat, so now rubber is getting extra "attention". Pete Waters, using an Oliver tigered *Eureka* and the club design A/2 topped the list in Glider and Power. Viv Lethaby used a Tigered *Toreador* to win combat after a terrific semi final with Allan Torrell's B.B. Amco'd *Duellist*.

Glider contests are proving popular in the CARDIFF M.A.C., the event on May 10th attracting 15 entries. Thirstiest entrants after five attempts at the two minute max. were:—

"Open" Class		"42-inch" Class	
E. J. Langton	8 : 09	R. Flaherty	4 : 53
E. J. Langton	7 : 05	E. J. Langton	3 : 53
D. G. Dyer	6 : 12	D. G. Dyer	3 : 43

## Ireland

Some advance publicity in the *Belfast Telegraph* resulted in some 126-150 spectators at the BELFAST M.A.C. stunt contest, and the standard was the highest ever. The first four went right through the schedule (nobody had completed it before) and Maurice Doyle came first in his first stunt comp. The model was a 300 sq. in. Oliver-powered scaled down *Nobler*. An unfortunate result of the big entry and consequent noise all afternoon, was the loss of the flying field! But this was rated almost inevitable.

## Scotland

ANGUS AND DISTRICT AERO-MODELLING LEAGUE Newsheet is full of encouraging news of Scots activity, in Leuchars M.A.C. someone has a flying lavatory seat I see. I wonder if it combats? R/C is popular in Dundee, Arbroath have a fine new clubroom, but still a little small for the prospective membership, and sad note is the Bucksburn have lost Dyce to the gliding fraternity, a common complaint these days unfortunately.

THE CLUBMAN.

## For Your Diary

### June 14th

Godalming T/R, Combat, Stunt Rally, Meadow Rec., Godalming.

### June 21st

Northern Heights Gala, all classes (Queen's Cup for Wakefields) except T/R, Stunt, at R.A.F., Halton.  
Clwyd Slope Soaring, Moel Ffamau, N. Wales, Open, A/2, Jr. and R/C events. S.M.A.E. insurance required. No fuse d/its.

### June 28th

Combat Rally, Ashford (Kent), Victoria Park, Ashford.

### July 5th

Butlin Trophy, A & B T/R, Flying Scale, Combat, Butlin's Camp, Mosney, Ireland. Open to all.

### August 2nd

Surbiton Gala, Open Free Flight at Chobham Common.

### August 16th

Devon Rally, F/F Rubber, Glider, Power, R/C, Combat at Woodbury Common, Nr. Exmouth.

Ramsgate Control Line Rally, T/R A and B, Stunt and Combat. Entries to M. Robinson, 21 Winterstoke Crescent, Ramsgate, Kent.

### August 23rd

South Midland Gala, all classes at College of Aeronautics, Cranfield

### August 30th

I.R.C.M.S. R/C contests, single and multi classes, R.A.F., Wellesbourne Mountford, pre-entry to 56 Lime Avenue, Leamington Spa.

### September 13th

Croydon Gala, F/F Rubber, Glider, Power, Chuck and Slope Glider, Chobham Common.

### September 27th

Midland Area Rally, venue to be announced.  
Southern Area Rally, 1/4 A, A, B, T/R, Combat, Open F/F all classes, Beaulieu Aerodrome.

### October 4th

South Coast Gala, venue to be announced.

## S.M.A.E. Contests

### June 14th

Second International trials, A/2, Wakefield R.A.F. Wigley, Lincs.

### June 28th

Area Championships, R/C Team Elims. Centralised Venue.

### July 12th

Model Engineer Cup, Team Glider. Area. Flight Cup. Open Rubber. Centralised.



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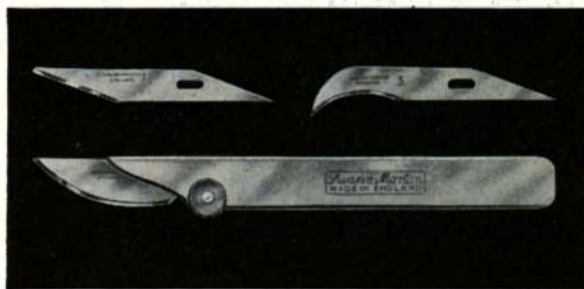
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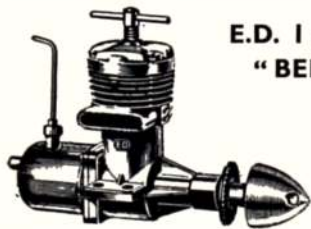
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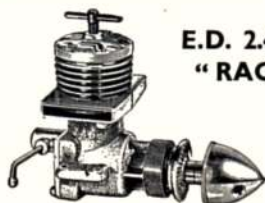
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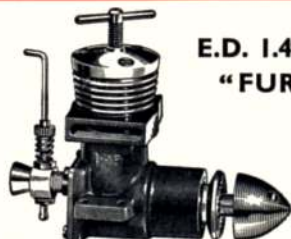
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