Diary

28-30th August Cardington	SMAE Indoor Nationals. Contact L Barr, 0628 25595.
3-4th September	Eifel Pokal. F1A, F1B, F1C. Zulpich, W Germany
4th September Area venues	SMAE 5th Area centralised event. Team Power(Keil), F1B(Gutteridge), A1.
4th September Cardington	SMAE Indoor Open. Contact L Barr, tel 0628 25595.
11th September Church Fenton	SMAE Northern Gala. O/R,O/P,O/G plus Northern area events combined mini and vintage. Contact J Godden tel (0532) 521002.
18th September Cardington	SMAE Indoor. F1D second team trials (Houlberg Gold Medal, 3 flights). Contact L Barr, tel 0628 25595
18th September Barkston Heath	Open Rubber Trophy. Start 10.00, flown in rounds. Substantial prizes. Pre-entry to D Hipperson.
24-25th September	Reg Allamby International. F1A, F1B, F1C. Goulburn, Australia
25th September Area venues	SMAE 6th Area Centralised event. Team Rubber (Farrow Shield), F1A (SMAE Cup), ½A power.
28th Sep- 4th Oct	World Championships, Goulburn, Australia
2nd October Odiham	SMAE Southern Gala. O/R, O/G, O/P, ½A P, CdH, HLG, A1. SMAE members. Contact N Couling, 0323 53116
8-9th October	California Invitational. F1A, F1B, F1C. Taft, USA
8-9th October	SAAA Bordertown International fly-in. Bodertown, Australia
9th October Cardington	SMAE Indoor. 1.5g single-design EZB Novices ONLY (£100 first prize). Contact L Barr, tel 0628 25595
9th October Church Fenton	Northern Area Rally. O/R,O/G,O/P, combined FAI (5 flights, no rounds), combined mini (4 flights, K factor), vintage. Contact J Godden,tel 0532 521002
15th October	19th Kup Republike F1A, F1B, F1C Zagreb

AUGUST 1983 83/08

FFn

FREE FLIGHT NEWS

Contents

Free Flight News	58
F1B WAKEFIELD, by M Howick	58
Crookham Gala	58
SMAE Nationals	61
1983 RAFMAA / SMAE Competition	61
SMAE 4th Area Centralised Results	61
World Championships News	61
AH-26, F1A by A Hacken	62
Noticeboard	64
National Free Flight Society	64

7 Ashley Road, Farnborough, Hants, England GU14 7DS

Compiled and published by Ian Kaynes, Paul Masterman, Malcolm Wood.

FREE FLIGHT NEWS

As discussed a couple of months ago, Ian Kaynes has moved. Please note the new address for all FFn correspondence concerning subscriptions and contributions :

7 Ashley Road
Farnborough
Hants
England GU14 7EZ.

Do not worry if you had recently written to the old address, mail is temporarily being redirected from there. Having completed the move (but not yet got the house tidy !) let's hope that we can get FFn back to the intended timetable of issue date early in the nominal month, which we had reached with the July magazine.

F1B WAKEFIELD by Mike Howick

Since my return to Wakefield flying in 1975 I have concentrated on putting together a reliable structure that stays 'as built' and is easy to prepare for flight.

It may appear that I am resisting modern materials in making a balsa motor tube in this manner, but the third winding of balsa does increase the strength many times over the more common two layer type. The whole thing is put together with lashings of thinned PVA glue squeezed well into the wood and the surplus wiped off (a messy business), but you do end up with a strong tube with an average weight of 25g for 570mm length.

CROOKHAM GALA Beaulieu July 10th

Gary Madelin reports : The organisers of this years Crookham Gala were blessed with equally as good flying weather as last year with even warmer conditions, hardly cooled by a light easterly wind. This resulted in very easy recovery and no lost models despite large patches of gentle lift and hazy conditions which prevailed all day.

There were very few dropped flights and by early afternoon Roy Miller and Phil Uden, both flying Wakefield, had maxed out in All-in FAI which was flown to 5 flights. A rush of activity occurred in the last hour when John Williams entered and maxed out with his trusty Lively Lady derivative that has been flying so well of late. He then went on to win the 3 way fly-off in slightly more helpful air than that found by the rubber flyers.

We decided to hold the open fly-offs a little later than usual to wait for the drift and thermal activity to decrease and in the event this produced a satisfactory result. Seven people flew off in rubber and George Sharp flying a new black and dayglow model on only its second flight launched at the same time as last years winner Paul Davies, both models climbing and gliding together and returning scores only one second apart. Their seven and three quarters minutes were not enough to win however, since John Carter flew a large fly-off type model to win with 8.29. Dave Hipperson broke a motor, rewound and then flew last on his own, but like last year he had to be content with second place.

John Carter also flew a large open glider in the 10 way glider fly-off, but was just pipped by Elton Drew flying an A2, achieving 2.49 in the very dead conditions.

Five reached the power fly-off. Norman Marcus was a bit outgunned by the fast and noisy models and although his Cox 15 powered high thrustline model glides well it didn't have the height on this occasion. Ken Faux flew his piped Rossi 15 model but went a bit left on the climb and Russell Peers stalled after transition. Screen and Hopper flew on rails and both did very commendable flights, with Julian just hanging on better in another close finish.

The usual Crookham trophies were presented to the winners together with unusual but very attractive plaques designed by Pete Stewart and depicting, for once, a shape actually recognisable as a model airplane ! With apologies to all those who had a long and late drive home, see you next year when we hope the weather will be just as good.

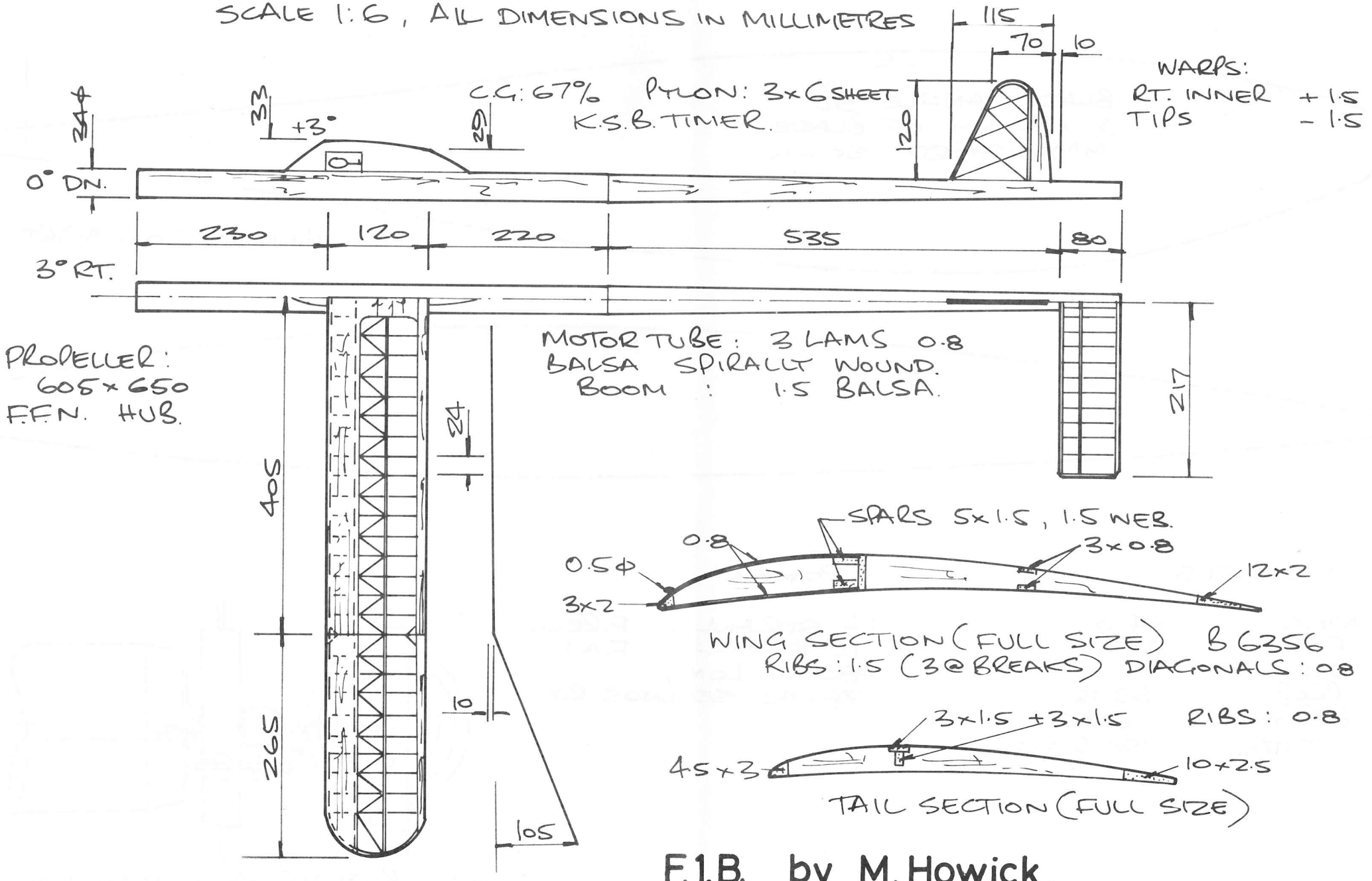
RESULTS

Open Glider	3x180	10 in F-O
1 E Drew	Bristol & W	540+169
2 J Carter	Falcons	+168
3 G Pink	Bristol & W	+162
4 B Lavis	Biggles	+152

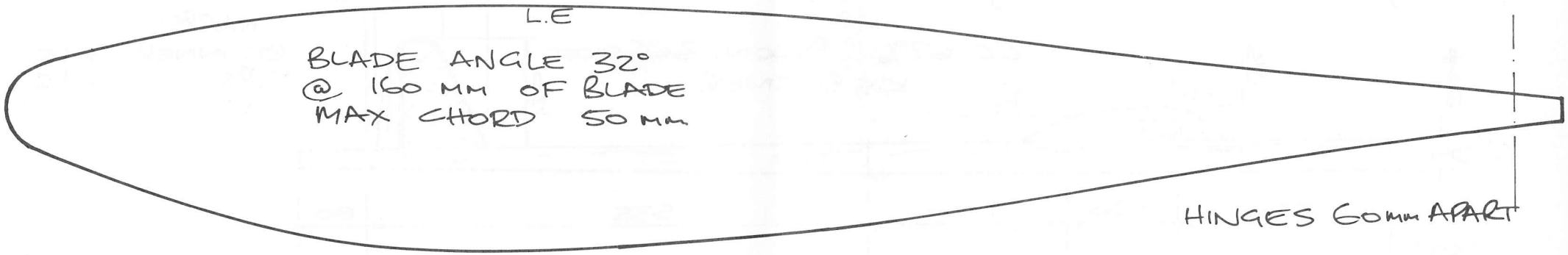
Open Rubber	3x180	7 in F-O
1 J Carter	Falcons	540+509
2 D Hipperson	Grantham	+473
3 G Sharp	Croydon	+466
4 P Davies	Bristol & W	+465

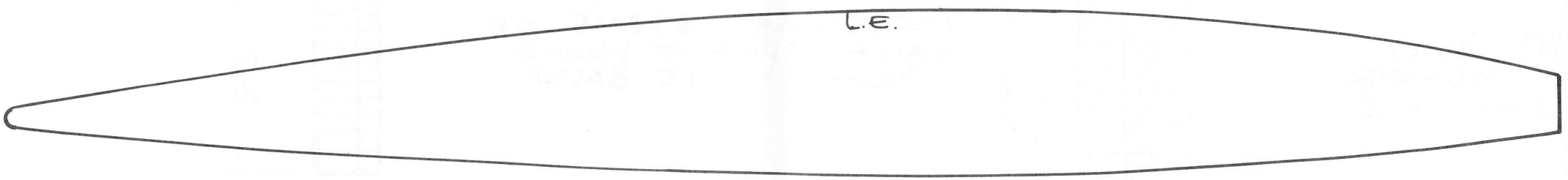
Open Power	3x180	5 in F-O
1 J Hopper	Freebirds	540+438
2 S Screen	Birmingham	+403
3 R Peers	Falcons	+397
4 K Faux	Freebirds	+343

All-in FAI	5x180	
1 J Williams	Freebirds	900+181
2 R Miller	Croydon	+158
3 P Uden	Crookham	+149
4 G Madelin	Crookham	888



F.1.B. by M. Howick.



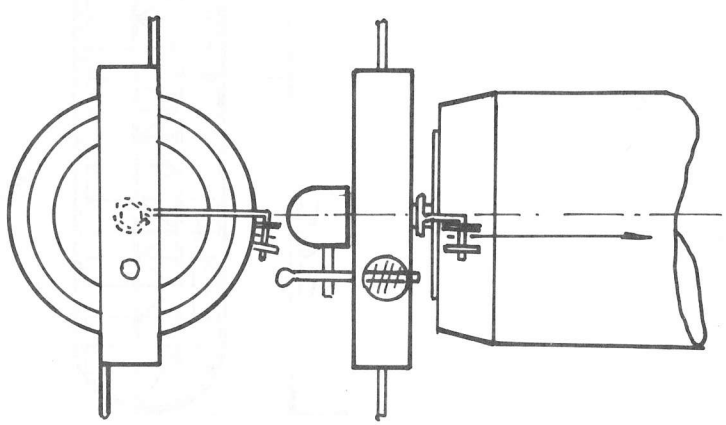


WEIGHTS

WING	:	54.0
FUS.	:	83.15
TAIL	:	7.0
ROD	:	38.15
BOBBINS	:	8.85
TOTAL	:	191.5 gms

POWER

14 STRANDS PIRELLI
OR 12 STRANDS F.A.I.
480 MM LONG
38-40 SECONDS RUN



AUTO RUDDER FROM F.F.N. HUB.

F.1.B. Full Size Propeller Details.

SMAE NATIONALS RESULTS

There are a few corrections to be made to the Nationals results which were published in the June FFn. First, our apologies are given to the HLG fliers whose event we completely overlooked. Twenty five flew and the results were

1	W Simms	Crookham	4.56
2	D Edmondson	C/M	4.55
3	P Ball	Grantham	4.42
4	M Page	Peterborough	4.41
5	J Hopper	Freebird	4.34

The results of the Junior National Championship (for the Heather Trophy) were

1	N Dixon	Birmingham	7 points
2	A Tennant	Timperley	6 points
3	G Neil	Anglia	4 points
	D Donnelly	Hamilton	4 points

In Coupe d'hiver M Richardson of Eastbourne club recorded 9.58 and placed fifth, so Stafford Screen was actually sixth with his 9.55.

1983 RAFMAA / SMAE Competition Barkston Heath June 25-26

F1A RAF FLYING REVIEW TROPHY
7 x 180 20 flew

1	P Owens	1252
2	J Williams	1220
3	A Cordes	1170
4	C Edge	1168
5	K Oliver	1165

F1B THURSTON TROPHY
6 x 180 + 1 x 150 8 flew

1	I Taylor	1171
2	M Howick	1136
3	J O'Donnell	1070
4	J Barnes	996

F1C
6 x 180 + 1x150 5 flew

1	R Monks	1230
2	R Baggott	1222
3	S Screen	1214

F1A CHAMPAGNE FLY-OFF 18 flew

1	G Madelin	240 + 300
2	A Cordes	240 + 229
3	D May	240 + 219
4	S Coy	240 + 200
5	T LeVey	240 + 196
6	R Sheen	240 + 194

F1B CHAMPAGNE FLY-OFF 7 flew

1	N Lee	240 + 209
2	J Barnes	240 + 185
3	J Abbey	240 + 184
4	M Howick	240 + 161
5	I Taylor	185

F1C CHAMPAGNE FLY-OFF 5 flew

1	S Screen	240
2	K Faux	239
3	P Harris	213
4	R Monks	196

SMAE FOURTH AREA CENTRALISED EVENT June 12th - RESULTS

Team Glider Model Engineer Cup + Plugge Points 91 flew 3x180

INDIVIDUAL RESULTS

1	J Cooper	Biggles	540+380
2	N Lee	E Grinstead	+283
3	J Williams	Freebird	+266
4	M Howick	E Grinstead	+209
5	W Bates	Biggles	+156
6	A Cordes	Birmingham	+150
7	J Bailey	Biggles	+148
8	D Neil	Anglia	+126
9	B Lavis	Biggles	+122
10	R Peers	Falcons	+102
11	M Coomes	Grantham	+ 85

(5 others with 540, no fly-off)

TEAM RESULTS

1	Biggles A (Bailey, Lavis, Parry)	1579
2	E Grinstead B (Howick, Stevenson, Taylor)	1519
3	E Grinstead A (Lee, Boxall, Cherry)	1479
4	Bristol & West A (Drew, Pink, Cummins)	1463
5	Grantham A (Coomes, Cuthbert, Gilmore)	1437
6	Anglia B (Neil, Brawn, Molton)	1432

Coupe d'Hiver 33 flew 5x120

1	M Chilton	EPS	600+139
2	G Ferer	Leicester	582
3	J Brookes	Clee Mac	578
4	G Sharp	Croydon	573
5	R Peers	Falcons	566
6	D Davitt	Leeds	552
7	M Dixon	Birmingham	545

F1C Astral Trophy 6 flew 5x180

1	S Screen	Birmingham	897
2	N Bridges	Cheltenham	756
3	R Moore	Biggles	575
4	F Chilton	Crookham	519

WORLD CHAMPIONSHIPS NEWS

We have received the second information bulletin from the World Champs organisers. It lists preliminary entries as having been received from the following countries : Argentina, Australia, Austria, Belgium, Canada, China, Denmark, Finland, France, Great Brtain, Holland, Israel, Italy, Japan, New Zealand, Sweden, USA, USSR, West Germany and Yugoslavia. It must be emphasised that these are countries indicating an intention to compete - not quite the same as actual entries. Australian FAI delegate Gordon Burford makes the same complaint which always crops up from organisers, that communication via the official National Aero Clubs is ponderous at best or non-existent at worst.

All participants should have received the details contained in this latest communication, together with details of the contest at Goulburn before the Champs and the Bordertown one after the Champs.

Notable points concerning the World Champs are : F1A on October 1st, F1B on October 2nd , F1C on October 3rd and a contingency day on October 4th to cover any delays in the flying. The timetable on each flying day has rounds of one hour duration starting at 7.00 and finishing at 15.50, followed by standard fly-offs of 15 minutes with 15 minutes between each fly-off. Sunrise is 05.38 and sunset 18.04.

Restrictions are specified on the position of streamer and thermal detector poles on the glider day - they must be on the launch line in the team's designated area and not interfere with other teams. Virtually all retreiving will be on foot. DT fuses will be allowed provided snuffer tubes are used, unless a government issue a total ban of all fires in the open. This is unlikely to happen following recent rainfall, but October could be warm and dry and so it would be wise to use timers instead of risk the chance of there being a ban.

ISRAEL TEAM

Itzhak Ben-Itzhak reports that the Israeli trials have now been completed and the following have been selected :

F1A Ilan Weiss, Igal Drory, Ofer Ben-David;
F1B Giora Herzberg, Omry Syrkis, Itzhak Ben-Itzhak;
F1C Otniel Cohen, Itzhak Yosipouitch.

The team manager will be Shaul Chorev.

NEW ZEALAND TEAM

After a long selection process entailing taking the total of the best three results out of about nine contests, the Kiwi representatives have been chosen as :

F1A M Sexton, P Wheeler, I Weston;
F1B J Malkin, A Barnes, C King;
F1C R Bain, M Sexton, I Weston.

AH-26 F1A by Arno Hacken

Following publication of his model AH-25 in the January 1983 issue of FFn, Arno asked us to point out that the notes should have stated that the wings were covered with 25g per sq m glass cloth. His article on wing construction has since explained that the 18g per sq m cloth was found to have very different strength across the weave compared to along the weave. Also, Arno sent a fully detailed drawing of his towhook to replace the sketch in that issue.

Although the AH-26 drawing makes reference to that diagram, have patience and you will see more details in a future issue of FFn.

To expand on the drawing, a full summary of data on AH-26 is given below. Dimensions are in mm unless stated and densities are in units of g per cc.

Wings Area 29.36 sq dm, span 2036, aspect ratio 14.12
Weight of inboard panel 54g, outboard 18g, total 144g

Tailplane Area 4.47 sq dm, span 500, aspect ratio 5, weight 8.5g

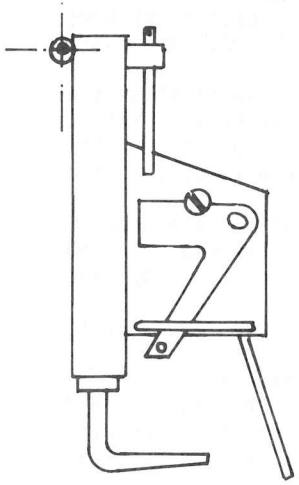
Fuselage Length 1040, weight 260g

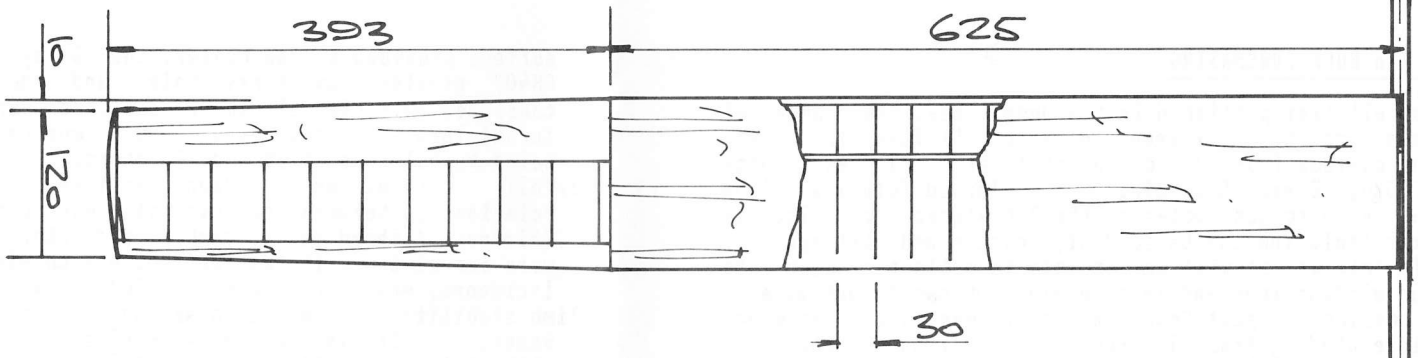
STRUCTURE

Wing inboard panels	Sheeting, upper and lower	0.9	density 0.10
	hard wood leading edge	5x2	0.45
	balsa leading edge	5x4	0.20
	balsa ribs (pitch 30)	1.5	0.19
	top spar, spruce	8x2 to 6x2	0.55
	lower spar, spruce	8x1.5 to 6x1.5	0.55
	balsa webbing	1	0.22
	steel wing joiner	dia 4 to 1	
	Sheeting covered with 25 g/sq m glass cloth; carbon fibre reinforcing; all joints with epoxy		
Wing tip panels	Sheeting, upper and lower	0.9	density 0.10
	hard wood leading edge	5x2 to 4x1	0.45
	balsa leading edge	5x4 to 4x2	0.15
	balsa ribs (pitch 40)	1.5	0.18
	top/bottom spar, balsa	0.9	0.20
	partial spar, balsa	6x1.5 to 0x1.5 at 210	0.15
	balsa webbing	1	0.15
	trailing edge	18x3 to 12x2.5	0.18
	Covered with lightweight tissue		
Tailplane	Balsa leading edge	4x4	0.16
	balsa ribs	1.5	0.10
	diagonals	1	0.14
	top spar, balsa	7x2 to 3x2	0.16
	lower spar, balsa	2x2	0.20
	trailing edge	8x2	0.14
	Covered with lightweight tissue		

Fuselage Pylon, 2 dural; Obechi pod; "Jim Walters" tailboom; Koster DT FM transmitter recovery aid; Russian type towhook - unlatch tension 4Kg; steel wire "struts".

SCALE 1:6 ALL DIMENSIONS IN MILLIMETRES





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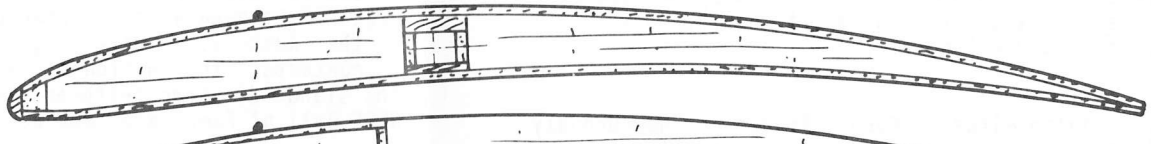
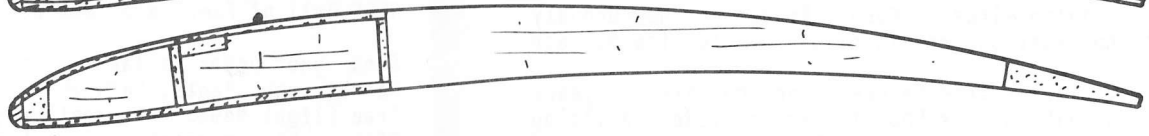
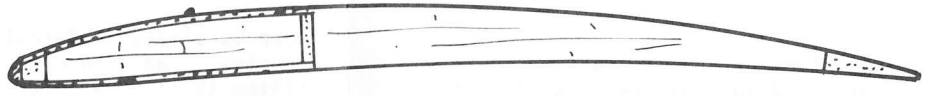
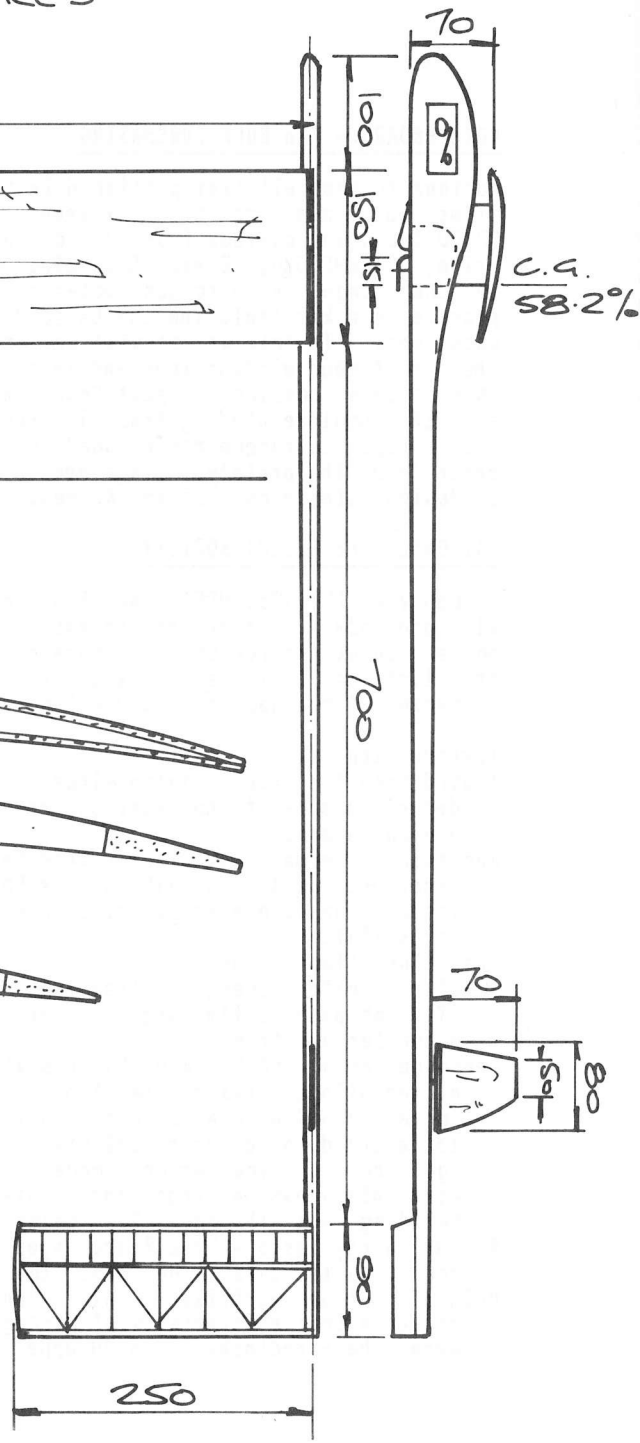






FULL SIZE SECTIONS REFER TEXT FOR WOOD SIZES, WEIGHTS E.T.C.



'AH 26' F.1.A. by Arno Hacken Holland.

NOTICEBOARD - FFn BULK PURCHASING

Further to the full list published in the June issue, the range of items for sale has been extended to include DT fuse. This costs £2.00 including postage from David Stapleton at 21 Ravensbourne Drive, CHELMSFORD, Essex CM21 2SJ. A planned future addition to the range is a torque meter on the Bob Wilder style. This is planned as a kit including the basic dial, pointer and fittings for each end. In this way it will be possible to build the meter into the rod of your winding tube and incorporate your own torque wire - this allows scaling to suit Coupe, Wakes or open rubber and means that the complete winding train is much shorter than is the case with a seperate torque meter added in front of the winding rod. The meter is at the prototype stage and if you are interested in comment on design, please contact Ian Kaynes.

NATIONAL FREE FLIGHT SOCIETY

A supply of the 1983 NFFS Symposium Reports is on its way to FFn and will probably arrive during September. The cost is £8.50 including postage in UK and Europe. We have not yet seen a copy but can give the list of contents in this year's report together with brief summaries of the papers from Jim Bennett :

Introduction

A word from the Exec, Flying sites - Hardy Brodersen humourously describes some of the usual contest locations around the US and one in Canada.

Recording thermal detectors - Fred Pearce brings out his ten years experience with an RTD in this "how to use" article. Building instructions are also given, complete with wiring diagram and parts list.

Tree line effects - by Joyner

Wakefield climb energy utilisation - Andy Bauer goes into dynamics of climb path, optimizing climb and finding the most efficient propeller and trim.

Aerodynamics of a P30 - Bob Thoren's views and analysis with a set of equations giving the impact of a freewheeling prop (drag increased 66% over a non-prop configuration), glide tests, climb tests and duration potential (two and a half minutes).

George, how do you design a model ? - An interview with Perryman gives his views on large and vintage rubber models - design, building and flying. Six Nakashima cartoons are in this one.

Rubber energy tests - Fred Pearce again, presenting his latest FAI and Pirelli data. He says the April 1983 FAI is excellent.

Polars of four airfoils - Alan Johnson did some wind tunnel research in the University of Michegan's low speed tunnel. These were the Seredinsky (?) 4410 upper surface with a modified lower surface provided by Joe Foster, the GX by George Xenakis, the CH407 provided by Henry Cole, and the Eppler 203. Alan concludes that two of these sections perform better without turbulators and one (the 4410) improved with a 0.5 mm square balsa turbulators at 7% and 27% chord.

Airfoil correlations - Jean Wantzenreither investigated the relationship between the physical dimensions of several airfoils. Thickness / chord ratio, camber and chord locations of camber were correlated with the coefficients CD min, CL max, CL for zero incidence, max CL/CD and CL for CL/CD max.

Climb stability of symmetric power models - a second article by Andy Bauer. It is an analysis of an F1C model trimmed to climb without turn or roll. It gives his best estimate of an optimum stabiliser airfoil.

Glider ramblings - Bob Klipp and Chris Matsuno comments on A1, A2 and HLG, including three-views of each type.

Indoor guidelines - Jim Richmond comments for newcomers.

Other indoor info includes plans of Hewitt Phillips' 1938 Stout Trophy winner (22 minutes), a variation of a drawing of Laurie Barr's "Fiddler on the roof", and Dirk Hardcastle's US Cat II record holding Easy B.

Free flight down under - Peter Lloyd describes the organisation of the Australian governing body of model aviation, the state contests, the nationals and the FAI qualifying procedure.

The standard sympo features are there, NFFS Models of the Year and NFFS Hall of Fame, and Who won what when where.

Send your order to Ian Kaynes at the NEW address 7 Ashley Road, Farnborough, Hants, GU14 7EZ , with payment of £8.50 payable to Free Flight News. Alternatively, you may pay by means of a Post Office Giro payment to Free Flight News Giro Account, 25 365 4009.

There is always interest in back numbers of the NFFS Symposium Reports. We can order these for you or you can order by directly writing to : Fred Terzian (NFFS Plans and Publications) at 4858 Moorpark Avenue, San Jose, CA 95129, USA. Currently Fred can supply the following issues, with prices in US Dollars given in brackets - 1971 (4.50), 1972 (4.50), 1973 (5.50), 1974 (6.00), 1976 (7.00), 1977 (8.00), 1978 (7.50), 1979 (7.50), 1980 (9.00), 1981 (7.50), 1982 (10.00), 1979 International Symposium (7.50), 1979 World Champs Report (7.50), NFFS Digest all back issues (22.00). To these prices must be added postage at $2 for one book or $3 for two or more books by surface mail, or $4.50 per book for airmail to Europe, or $5.00 for airmail to the Far East. In addition, you should make payment in US Dollars.

For NFFS membership details, write to Hal Woods at 707 2nd Street, Davis, CA 95616, USA.