Free Flight news FFn

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An FFn subscription renewal form is included on pages 145 and 146

DIARY

November 3 Church Fenton	Falcons Gala. O/R, O/G, Combined Power (Timperley rules), Mini vintage, F1B. Start at 9am. Contact R Peers, 01270 560893. You must be on the attendance list, call J Northrop on 0113 2581292.
November 10 N Luffenham	Coupe International. Contact D Davitt 0113 2675433
November 17 Church Fenton	Steve Barnes event. 'Mainly Power' day. Comb power (5 sec with bunt, 7 sec with AR/VIT, SLOP & nostalgia 10-12 sec, vintage 15 sec, EOP 30 sec), Mini Vint R/P, Comb glider (vint 100m line, nostalgia 75m, modern/open 50m). In comb events reserves ,must be of same class, but multiple entry with different classes allowed. Start 9.30. Contact: S Barnes 01709 548553
November 24 Coventry	BMFA Free Flight Forum. Holiday Inn. Start 10am. See p 129 of Oct FFn.
December 1 Middle Wallop	Coupe Europa Coupe d'Hiver. See page 142. D Beales 020 8858 2714, bealesw@aol.com, M Dilly 020 8777 5533 martindilly@compuserve.com
December 1 Church Fenton	Cleemac event. Comb SLOP+nostalgia P, O/G, mini vint R. Start 10am, 2 flts before 2pm, 3rd flt/flyoffs from 2pm. Contact: T Rushby, 01472 814864.
December 15 Church Fenton	NAFF News December Dazzler. O/R, O/P – 2 or 3 flts possibly a large max; comb event for: tailless R/P, EOP (30 sec), vint P (15s), Nost.P (12s), SLOP (10-12s), F1J (7s), vint.G (100m), O/G (50m), vint.R (may be ROG) all 3 flts; Comb "mainly mini" (3 flts): E30, nost.G and Tless G (100m), mini vint R/P + Brit.P (10sec); Experimental mini (3 flts) comb CO2, CdH, P30, A1, BMFA ½A (7 sec) – this event may have a longer than usual max. All events to conventional reserve rules and no multiple entry Start 9.30. Contact: J Godden, 0113 2521002
December 29 Church Fenton	Christmas Flyer. O/R, O/G, O/Vint, P30, Comb E30+CO2, Comb power (O/P 7 sec, SLOP 10/12 sec, E 30 sec). Contact / CD: D Davitt 0113 2675433

7 Ashley Road, Farnborough, Hants, England GU14 7EZ kaynes@compuserve.com

Compiled and produced by Ian Kaynes, Paul Masterman and Michael Warren

CARGOLIFTER LOAFER F1L/EZB BY LAURIE BARR

This EZB/F1L is number 4 in the series built over the last 5 years. Its forerunners had by now become heavy with age and repairs, and knowing I was going to the Cargolifter hanger, and the immense height available, I went to a lot of trouble to ensure great stiffness, while keeping the airframe to 1.2 grams.

Most EZBs only fly in low ceilings, are much too floppy, and cannot cope with the huge launch torque required to make the most of very high ceilings, like Cardington, etc. As the great American Sal Taibi once remarked "Altitood is everything"!

This year in Hanger 1 we have enjoyed relaxed flying, and more people have turned up to fly. Many of their models are built with ordinary Balsa, with sagging wings and tailbooms, and the contortions they make when fully wound, wastes all the first burst of rubber power, and they never reach the roof!

Having now defined the detailed structure, I went to great lengths to test all the wood used, to find the highest SC (Stiffness Coefficent*) rating I could. I was fortunate, in that some of the wood used, was donated ("extracted under duress"!) from Bernie Hunt, some of which had a SC rating of 130!

I was determined not to exceed 1.2 grams, so I built and covered the whole model except the motorstick, and weighed the strucfsture to find the amount of weight I could use in the motorstick, which would have to cope with almost every turn I could apply to it, without too much twist that would warp the wings too far on launch, or bow the motorstick to give too much downthrust.

In amongst my rag-bag of "treasures", I found a piece of 1/4" x 1/8", that was exactly what I was looking for, and did not require any shaping to bring it down to weight. It had red "spidery" writing on it, just like Bernie Hunt's hand produces!

The end result of all this, is a model that seems to be able to take any amount of launch torque, and is launched vertically like a javelin, and climbs without hesitation to great heights. I hope to return next year, and give it all the motor can take, and just see if I can reach the roof at Cargolifter, 320 ft above! Laurie Barr.

* see the articles By Bernard Hunt and John Taylor which first appeared in Norwind and which were reprinted in the 2001 Free Flight Forum (contact Martin Dilly if you do not have a copy).

For those not willing to follow these tests, make several motor sticks, tailbooms, wing spars, and do a simple deflection test with a small weight, which will, at least, tell you which of each is the best you have! It will not tell you that it is good enough, as compared to SC testing, until you test fly the whole model, but it is still better than guess work.

FFN

A subscription renewal form is included at the back of this issue. We hope that you will want to renew your subscription as quickly as possible to ensure your continued supply of FFn next year. It is possible to place advance orders for the 2002 NFFS Symposium Report at the same time. Please not that the reports are not yet in stock, with an expected delivery date of early December.

BAD NEWS FROM FAI MODEL SUPPLY

From John Clapp

The rumours are true, no more TAN II rubber will be produced! A critical ingredient is no longer being produced due to the change in golf ball technology. A special version of this additive was crucial to produce TAN II.

Current Status

We are all out of factory cut 1/8" Tan II when the current orders are filled. A few 1 pound boxes are available. We are re-cutting 1/4" into 1/8" with our power stripper for those who would like it. We obviously do have 1/4" available as well as a few 10 pound (or 1 pound) boxes of 3/16". We expect all of this remaining Tan II rubber will be gone in the next few days.

We will keep enough 1/4", 3/16", and 3/32 in small boxes to support Science Olympiad for this school year. Many of you may know that this event is a fertile breading ground for Junior F1D fliers and other young aspiring modellers. If some of you don't already know, the USA Junior Team blew away the competition in the Junior World Champs! Please do not try to take advantage of this small S/O stock pile.

The Future

There will be no shortage of TAN SPORT! We have asked the factory to see what could be done to make what we would call TAN SUPER SPORT, and they have held meetings this week to see what possibilities exist. This new rubber, if feasible, would have greater energy storage than Sport, but some what less than the average value for TAN II.

We know that this situation, while not totally unexpected, presents a world wide problem. Please be reassured that it is not being taken lightly! We thank you all for your past and future support!

NEWS FROM BMFA FF TECH COMMITTEE

1. FFTC for 2003

Alan Gibbs, Geoff Stringer and Peter Tribe come to the end of there term of office on the FFTC in mid November, and the election forms have been issued to club secretaries following the nominations of Kris Best, John Carter, Mike Cook and Peter Tribe. Please ensure that your club returns their vote to select three to join Mike Woodhouse, Chris Strachan, and Dave Clarkson on next year's committee.

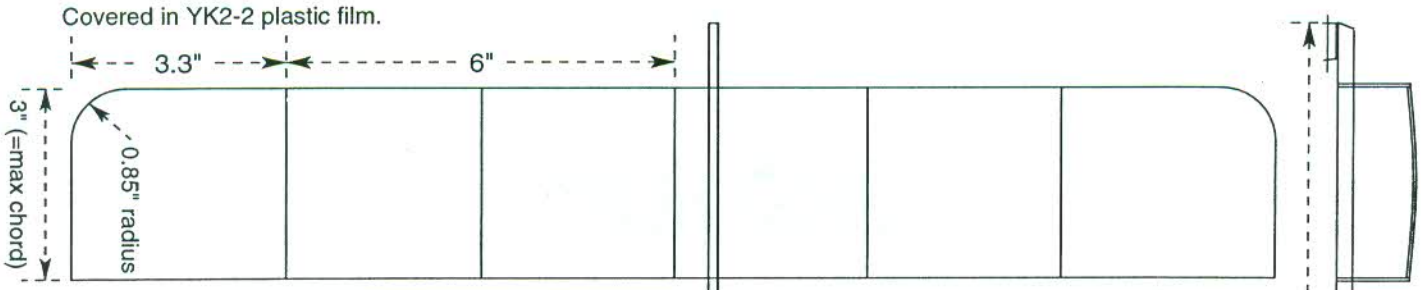
2. Team manager for 2003.

Applications for the post of Team and Assistant Team managers must be submitted to the FFTC before 15th November.

In the meantime, Martin Dilly had kindly offered to act as temporary manager to start the ball rolling with regard to making initial enquiries and arrangements for accommodation, supporters, etc.

3. Contest Results Service

The FFTC would like to thank Rod Brigginshaw on the excellent standard that he has set for the Contest Results Service over the past year. This can be a difficult and time consuming task, and I am sure that we are all grateful to Rod for all his efforts.



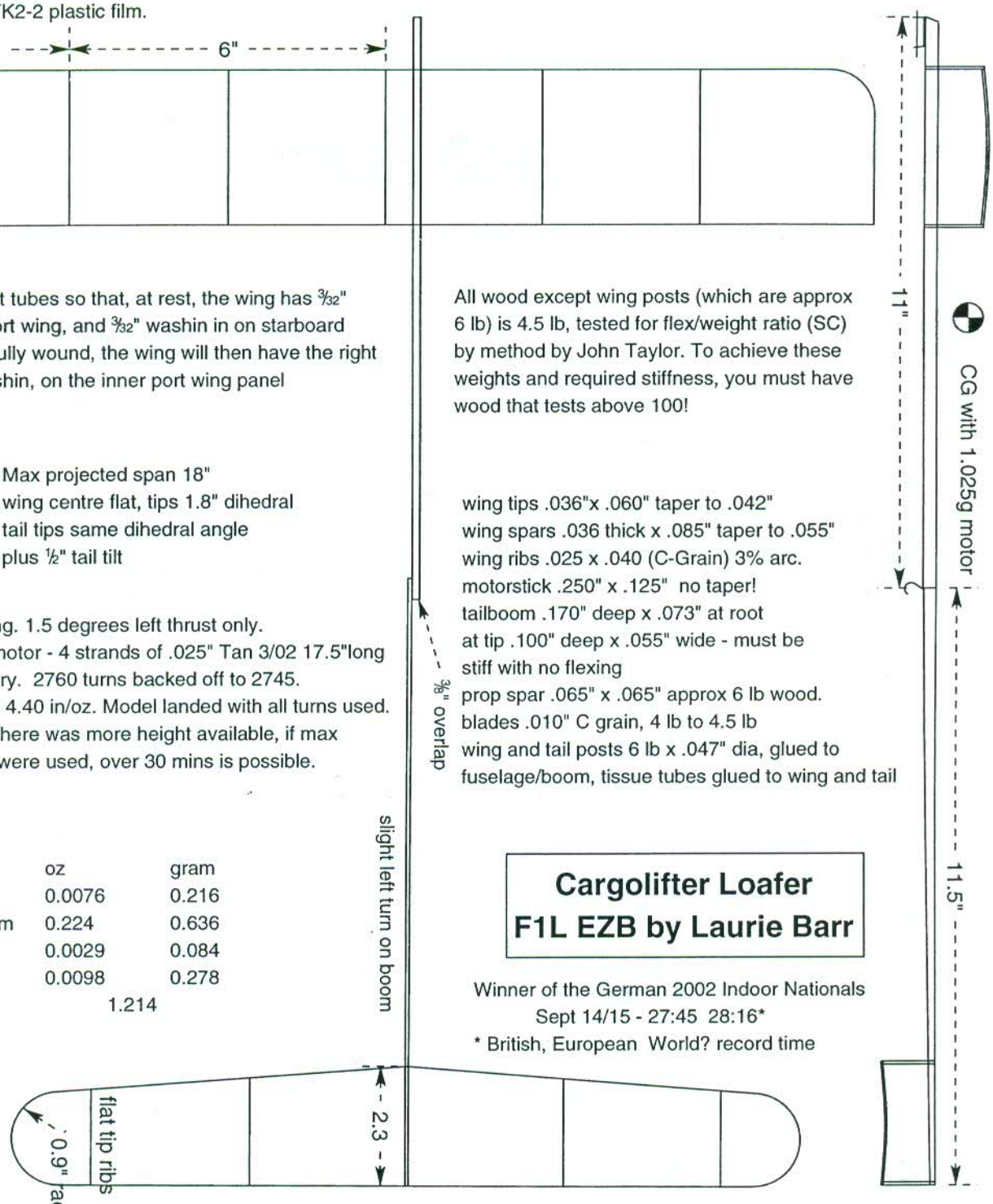
Glue wing post tubes so that, at rest, the wing has 3/32" washout on port wing, and 3/32" washin in on starboard panel. When fully wound, the wing will then have the right amount of washin, on the inner port wing panel

All wood except wing posts (which are approx 6 lb) is 4.5 lb, tested for flex/weight ratio (SC) by method by John Taylor. To achieve these weights and required stiffness, you must have wood that tests above 100!

Max projected span 18"
wing centre flat, tips 1.8" dihedral
tail tips same dihedral angle
plus ½" tail tilt

wing tips .036"x .060" taper to .042"
wing spars .036 thick x .085" taper to .055"
wing ribs .025 x .040 (C-Grain) 3% arc.
motorstick .250" x .125" no taper!
tailboom .170" deep x .073" at root
at tip .100" deep x .055" wide - must be
stiff with no flexing
prop spar .065" x .065" approx 6 lb wood.
blades .010" C grain, 4 lb to 4.5 lb
wing and tail posts 6 lb x .047" dia, glued to
fuselage/boom, tissue tubes glued to wing and tail

Micro-X bearing. 1.5 degrees left thrust only.
Record flight motor - 4 strands of .025" Tan 3/02 17.5"long
1.025 grams dry. 2760 turns backed off to 2745.
Launch torque 4.40 in/oz. Model landed with all turns used.
At Cargolifter there was more height available, if max
turns (3246+) were used, over 30 mins is possible.

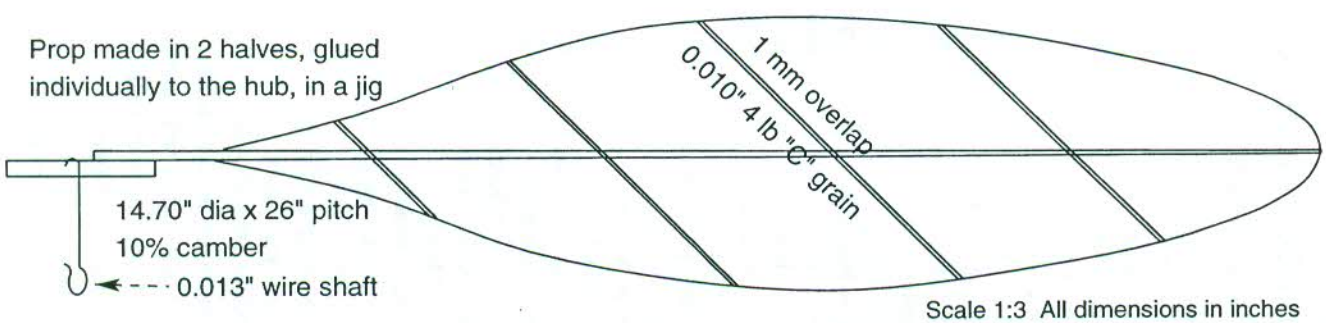


Weights	oz	gram
Wings	0.0076	0.216
Fus+boom	0.224	0.636
Tailplane	0.0029	0.084
Prop	0.0098	0.278
TOTAL	1.214	

Cargolifter Loafer
F1L EZB by Laurie Barr

Winner of the German 2002 Indoor Nationals
Sept 14/15 - 27:45 28:16*
* British, European World? record time

Prop made in 2 halves, glued
individually to the hub, in a jig



Scale 1:3 All dimensions in inches
Dimensions and plan for wing and tail shown flat

21st INDOOR WORLD CHAMPIONSHIPS CLASS F1D, Slanic, Prahova, Romania, October 7–12

Senior Individual results			R1	R2	R3	R4	R5	R6	2-flt total	Round-by round position					
1	James Richmond	USA	1.10	35.29+	31.33	28.51	36.15*	0.00	71.44	30	24	1	1	1	1
2	Popa Aurel	ROM	29.39	33.03*	31.50	32.09+	9.58	28.31	65.12	5	1	2	2	2	2
3	John Kagan	W/C	27.01	27.09	23.34	31.10	31.15+	32.55*	64.10	11	6	12	10	4	3
4	Amoraritei Dan	ROM	28.33	30.07	30.09+	30.02	29.48	33.24*	63.33	8	3	6	7	10	4
5	Robin Bailey	GBR	30.43	29.53	30.45+	31.40*	0.54	29.15	62.25	3	2	4	3	3	5
6	Lawrence Cailliau	USA	17.00	30.32+	22.51	0.05	30.06	31.25*	61.57	24	14	14	15	8	6
7	Lutz Schramm	GER	28.41	0.00	29.17	30.09+	31.48*	1.36	61.57	7	29	9	9	5	7
8	Oleg Korniychiuk	UKR	30.34+	24.40	31.21*	29.54	1.03	22.06	61.55	4	5	3	4	6	8
9	Peter Cuttler	GER	31.11*	0.00	28.21	29.24	25.19	29.49+	61.00	2	25	7	6	9	9
10	Stephen Brown	USA	31.23*	25.54	29.28+	24.59	26.55	23.13	60.51	1	4	5	5	7	10
11	Fred Tellier	CAN	29.08	22.09	30.05*	29.45	29.52+	20.33	59.57	6	10	8	8	11	11
12	Derek Richards	GBR	23.44	26.00	0.00	24.59	29.17+	30.33*	59.50	14	11	17	17	16	12
13	Ronald Green	GBR	11.12	28.14	29.06+	29.07*	0.00	23.33	58.13	28	21	10	11	12	13
14	Andras Ree	HUN	19.19	23.10	22.49	25.17	27.32+	29.46*	57.18	21	18	23	22	18	14
15	Zoltan Sukosd	HUN	27.17+	26.24	2.05	26.16	28.31*	26.06	55.48	9	7	13	14	13	15
16	Jan Dihm	POL	25.56	26.34	27.39+	27.34	28.05*	25.22	55.44	12	9	11	13	14	16
17	Daniel Medina Mangas	ESP	22.27	27.06+	25.46	28.12*	22.27	19.10	55.18	18	12	15	12	15	17
18	Edmund Liem	CAN	16.00	22.47	23.23	22.46	26.23+	28.17*	54.40	25	22	22	23	19	18
19	Deszo Orsovai	HUN	27.10*	25.33	24.07	24.37	27.08+	22.35	54.18	10	8	16	16	17	19
20	Edward Ciapala	POL	23.47	21.02	24.50+	20.03	5.01	27.47*	52.37	13	15	19	21	23	20
21	Mangalea Corneliu	ROM	1.36	4.31	1.15	19.02+	9.45	33.30*	52.32	29	31	31	31	31	21
22	Karl Schonfelder	GER	0.00	18.24	18.27	15.36	27.26*	24.48+	52.14	31	30	28	29	24	22
23	Manuel Diaz Garcia	ESP	22.43	19.45	24.43*	24.41+	21.17	24.24	49.24	15	19	20	18	20	23
24	Dieter Siebenmann	SUI	22.41+	26.19*	16.02	21.54	0.47	16.19	49.00	16	13	18	19	21	24
25	Sergy Mosolov	UKR	19.56	22.36	24.26*	24.22+	24.14	24.22	48.48	20	17	21	20	22	25
26	Enomoto Hideyo	JPN	22.30+	22.16	21.29	22.36*	20.55	22.13	45.06	17	16	24	24	25	26
27	Jerzy Markiewicz	POL	19.59+	22.24*	17.49	15.01	16.45	6.38	42.23	19	20	25	25	26	27
28	Luis Font Bellot	ESP	17.18	20.32*	19.33+	15.42	14.30	17.12	40.05	23	23	26	26	27	28
29	Raymond Jones Colin	CAN	15.43	14.40	11.16	18.45+	15.38	19.28*	38.13	26	27	30	30	30	29
30	Rimas Steponenas	LTU	11.18	18.22+	19.20*	6.26	0.23	4.46	37.42	27	28	27	27	28	30
31	Vitalijus Salogubovas	LTU	18.02	12.34	0.00	18.52*	18.34+	16.59	37.26	22	26	29	28	29	31
No.of best flights in each round			3	4	5	5	5	9							
No.of 2nd best flights each round			5	4	7	6	7	2							
Total no.of scoring flights each round			8	8	12	11	12	11	Total						
No.flts exceeding 25 min			12	14	12	14	15	13	80						
No.flts exceeding 30 min			4	4	6	5	4	5	28						
No.flts exceeding 35 min			0	1	0	0	1	0	2						

Junior individual results

1	Doug Schaeffer	USA	33.04+	30.54	26.14	32.40	32.51	36.12*	69.16	1	1	1	1	2	1
2	Benjamin Saks	USA	33.04+	24.50	13.00	14.53	33.10*	32.09	66.14	1	2	2	2	1	2
3	Somesan Horatiu	ROM	27.26+	26.56	21.00	27.53*	27.00	20.00	55.19	3	3	3	3	3	3
4	Tamas Sukosd	HUN	27.10+	22.35	18.35	0.00	2.45	27.57*	55.07	4	5	5	5	5	4
5	Olexandr Kovalyov	UKR	23.07	28.48*	23.02	8.20	17.30	24.27+	53.15	5	4	4	4	4	5
6	Mathew Chalker	USA	18.54	16.41	19.55	24.34+	21.10	25.58*	50.32	8	9	8	7	8	6
7	Pukowiec Michail	POL	13.48	15.20	20.02	24.00+	24.56*	16.46	48.56	12	12	10	8	6	7
8	Pop Ionut	ROM	22.11	14.33	23.06*	20.00	22.50+	21.56	45.56	6	8	6	6	7	8
9	Mariusz Rogowski	POL	17.31	16.20	17.42	21.33*	20.42+	0.16	42.15	10	10	11	10	9	9
10	Ignas Valiconis	LTU	20.19+	20.11	14.27	18.05	21.10*	2.20	41.29	7	6	7	9	10	10
11	Lukas Ivanuskas	LTU	6.56	0.00	17.56	16.56	19.58+	20.50*	40.48	13	13	13	14	12	11
12	Martynas Markulas	LTU	18.21	18.52	19.18+	18.05	18.07	19.20*	38.38	9	7	9	11	11	12
13	Ivan Mihnea	ROM	4.51	1.39	17.39	17.37	18.37+	19.33*	38.10	14	14	14	13	13	13
14	Jakub Filek	POL	14.31	14.49	16.16	19.31*	0.48	16.20+	35.51	11	11	12	12	14	14

No.of best flights in each round	0	1	1	3	3	6	
No.of 2nd best flights each round	5	0	1	2	4	2	
Total no.of scoring flights each round	5	1	2	5	7	8	**Total**
No.flts exceeding 25 min	4	3	1	2	3	4	17
No.flts exceeding 30 min	2	1	0	1	2	2	8
No.flts exceeding 35 min	0	0	0	0	0	1	1

Senior Team Results

			Total	**Round-by-round places**					
1	USA	USA	194.32	9	3	1	1	1	1
2	Romania	ROM	181.17	7	6	8	5	5	2
3	Great Britain	GBR	180.28	3	1	2	2	2	3
4	Germany	GER	175.11	6	9	3	3	3	4
5	Hungary	HUN	167.24	1	2	4	4	4	5
6	Canada	CAN	152.50	5	7	7	8	8	6
7	Poland	POL	150.44	2	4	5	6	6	7
8	Spain	ESP	144.47	4	5	6	7	7	8
9	Ukraine	UKR	110.43	8	8	9	9	9	9
10	Lithuania	LTU	75.08	10	10	10	10	10	10
11	Switzerland	SUI	49.00	11	11	11	11	11	11
12	Japan	JPN	45.06	12	12	12	12	12	12

Junior Team Results

			Total	**Round-by-round places**					
1	USA	USA	186.02	1	1	1	1	1	1
2	Romania	ROM	139.25	2	2	2	2	2	2
3	Poland	POL	127.02	3	3	4	3	3	3
4	Lithuania	LTU	120.55	4	4	3	4	4	4
5	Hungary	HUN	55.07	5	6	6	6	6	5
6	Ukraine	UKR	53.15	6	5	5	5	5	6

F1E, LUBOMIA, POLAND, SEPT 27-28

Rybnik Cup, Sept 27, 29 flew

1	E Mang	AUT	379.40
2	D Bildea (J)	ROM	318.03
3	S Kubit	POL	316.59
4	D Petcu	ROM	307.85
5	V Salistean (J)	ROM	294.83
6	S Ionita	ROM	292.61

Governors Cup, Sept 28, 34 flew

1	J Wojtak	POL	297.78
2	F Kanczok	POL	288.89
3	M Noskova (J)	SVK	286.11
4	I Crha	CZE	285.00
5	M Popescu	ROM	276.95
6	J Smerengai	SVK	275.00

F1E GERMANY, OBERKOTZAU, OCT 18-19

Fohrlberg Cup, Oct 18, 12 flew

1	F Mang	AUT	463.34
2	D Petcu	ROM	411.66
3	G Viktor	GER	387.77
4	J Morgala	POL	387.22
5	W Dziuba	POL	380.01
6	M Popescu	ROM	370.00

Oberkotzau, Oct 19, 14 flew

1	F Mang	AUT	500.00
2	H Schuberth	GER	477.33
3	D Petcu	ROM	469.17
4	M Popescu	ROM	467.67
5	V Paireli	ROM	451.92
6	F Draghici	ROM	448.67

DJORDJE ZIGIC, Zrenjanin,Yugoslavia, Sep 28

F1A 13 flew

1	D Zulic	SLO	1245
2	B Zulic	SLO	1189
3	R Blagojevic	YUG	1128
4	Z Zivkovic	YUG	1126
5	M Tica	YUG	1093

F1B 4 flew

1	B Lacimic	YUG	1260
2	S Gostojic	YUG	1256

SIERRA CUP, Sacramento, USA, Oct 11-12

Report by Bob Norton

There are at least two good reasons for Europeans to attend the Sierra Cup contest in Sacramento, California. First, it is the almost last chance to accumulate World Cup points, but it's really about the weather. At this time most of the weather in Europe is beginning to be cold and rainy. The weather during the two days of the contest can only be described as ideal, tending toward perfect. Friday (mini day) was warm and breezy, but never windy. Saturday was calm with monster thermals -- and the accompanying downdrafts.

Many name fliers dropped on Friday, Martyn Cowley got a 27 second first round in F1H, and others dropped, leaving only two in the flyoff. Due to an injured ankle, Bob Norton found walking difficult, never mind running. He picked lift and did an up and off, with a good zoom. This worked for seven rounds, but for the last flyoff round, which was nine minutes, the air had cooled, and there was no lift. Flying an F1H from his own "factory" Vasily Baschazny got a good bunt, but was soon down, winning by 18 seconds. In F1G, Michael Davis from Sacramento flew well finishing ahead of Igor Vivchar. F1J was a contest of Americans, again with a local flier Dave Shirley winning by a substantial margin.

The next day, the major events were flown from a rise above the main flying field, as balloons that were launched prior to the beginning of the contest showed drift toward a main highway. There was some buoyant air , but no thermal activity. The contest director, Mike McKeever decided against using a "super max" for the first round, which caused only a few dropped flights. The next round was also flown from the hill, and the contest was moved back to the usual location.

Although the weather was very good, the Sierra Cup field has some hazards. The first is the "tar weed " plants, that leave a sticky, smelly residue on the shoes, socks, and legs. Cattle are grazed at the site and the tracks that they leave in the mud dry and harden into craters that can easily cause injury to the unwary

The flyoffs were facilitated by the contest director, who moved things along smartly, causing all fly offs to be concluded without having to use Sunday, the reserve day. The Saturday night prize banquet was held in a winery which is also a restaurant. The food was good, and the companionship was to the usual standard of conviviality.

F1A 21 flew

1	S Rumpp	GER	1260	+300	+420	+379
2	M Cowley	USA	1260	+300	+420	+315
3	D Zink	USA	1260	+300	+420	+233
4	T Cousens	USA	1260	+300	+420	+230
5	J Cooper	GBR	1260	+300	+420	+163
6	P Brocks	USA	1260	+300	+196	
7	L Hines	USA	1260	+300	+66	
8	D Parker	USA	1252			
9	V Bezchasny	UKR	1250			
10	B van Nest	USA	1225			
11	F Terzian	USA	1218			

F1B 21 flew

1	R Blackam	AUS	1260	+300	+420	+349
2	J Fitch	USA	1260	+300	+420	+332
3	B Piserchio	USA	1260	+300	+420	+325
4	D Blackam	AUS	1260	+300	+420	+303
5	B Jensen	USA	1260	+300	+420	+291
6	R Morrell	USA	1260	+300	+420	+289
7	W Ghio	USA	1260	+300	+420	+279
8	B Booth	USA	1260	+300	+391	
9	E Ryan	USA	1257			
10	I Vivchar	UKR	1256			
11	A Andriukov	USA	1243			

F1C 9 flew

1	E Verbitsky	UKR	1260	+300	+420	+480
2	D Galbreath	USA	1260	+300	+420	+409
3	J Carroll	USA	1260	+300	+420	+383
4	K Oliver	USA	1260	+300	+263	
5	D Joyce	USA	1260	+288		

KRKA CUP, Novo Mesto,Slovenia,Oct 11-13

F1A 34 flew

1	A van Eldik	NED	1260	+60e +267
2	B Zulic	SLO	1260	+60e +114
3	C Bachmann	SUI	1260	+33e
4	D Gomboc	SLO	1257	
5	M Nardin	SLO	1249	+22e
6	J Voros	HUN	1249	
7	J Brezigar (J)	SLO	1240	
8	D Terlep	SLO	1235	
9	A Notaros	HUN	1230	

F1B 18 flew

1	B Bijelic	YUG	1260	+120e +300
2	I Kolic	YUG	1260	+120e +297
3	M Lovato	ITA	1260	+120e +283
4	D Zulic	SLO	1260	+120e +224
5	K Salzer	AUT	1260	+120e +217

F1C 5 flew

1	R Truppe	AUT	1260	+120e +300
2	S Katyba	UKR	1260	+120e +195

BMFA 6TH AREA CENTRALISED, OCT 6

Team Open Glider, 47 flew

1	A Jack	Tynemouth	7.30+4.03
2	T Nicholson	NWFFG	7.30+3.37
3	B Nicholson	NWFFG	7.30+3.27
4	W Colledge	Birmingham 'A'	7.30+3.22
5	J Carter	Falcons	7.30+3.06
6	D Greaves	Bristol&West 'A'	7.30+2.58
7	A Gibbs	Birmingham 'B'	7.30+2.52
8	M Dilly	Croydon	7.30+2.38
9	J Pennington	Bristol&West 'A' B	7.30+2.36
10	R Audley	Bristol&West 'A'	7.30+2.30
11	P Tribe	Bristol&West 'A'	7.30+2.21
12	G Pink	Bristol&West 'C'	7.30+2.15
13	D Neil	Bristol&West 'B'	7.30+2.02
14	K Taylor	East Grinstead	7.30+1.39
15	K Burt	Bristol&West 'B'	7.30+1.32
16	M Cook	Maidstone	7.28

O/G Team Scores, Model Engineer, 19 teams

1	Bristol &W A	+8.04	8	Crookham A	12.52
2	Bristol &W B	+5.55	9	Croydon	12.50
3	NWFFG	20.15	10	Maidstone	12.43
4	Bristol &W C	20.01	11	Cleemac	12.29
5	Birmingh'm A	19.54	12	Bristol &W D	12.14
6	Vikings A	19.03	13	Crawley	11.32
7	Biggles	15.28	14	Vikings B	11.31

F1G (Coupe) 23 flew

1	D Hipperson	C/M	10.00+5.29
2	J Minshull	C/M	10.00+2.20
3	R Bellamy	Bristol&West	10.00+2.12
4	E Flynn	NWFFG	9.58
5	N Rogerson	NWFFG	9.44
6	T Grey	C/M	9.38
7	G Sharp	C/M	9.30
8	J White	Croydon	9.28
9	R Vaughn	Crookham	9.24
10	R Elliot	Croydon	9.09

F1C (Astral) 10 flew

1	S Screen	Birmingham	12.30+6.34
2	G Fuller	Bristol&West	12.30+5.58
3	J Thompson	Crookham	12.30+3.59
4	P Ball	Grantham	12.30+3.50
5	A Jack	Tynemouth	12.30+3.23

Mini Vintage 30 flew

1	G Shacklock	Timperley	10.00+7.47
2	G Sharp	C/M	10.00+6.27
3	J O'Donnell	Timperley	10.00+6.12
4	N Allen	East Grinstead	10.00+5.49
5	G Ferrer	Timperley	10.00+5.27
6	D Hipperson	C/M	10.00+4.50
7	R Tiller	Bournemouth	10.00+4.05
8	R Marking	CVA	10.00+3.43
9	C Strachan	Biggles	10.00+3.25
10	S Willis	Croydon	10.00+2.41
11	D Taylor	Richmond	10.00+2.25
12	J Bailey	Biggles	10.00+2.15
13	K Taylor	East Grinstead	10.00+1.34

PLUGGE CHAMPIONSHIP POINTS

1	Bristol & West	1101	8	Biggles	437
2	Birmingham	993	9	Morley	369
3	Crookham	946	10	E Grinstead	350
4	Vikings	779	11	Falcons	283
5	NWFFG	643	12	Timperley	272
6	Tynemouth	548	13	Croydon	247
7	Grantham	459	14	Maidstone	210

BMFA SENIOR CHAMPIONSHIP POINTS

Final positions. 173 people scored points

1	P Ball	143.5	17	A Jack	32
2	D Hipperson	116	18	G Ferer	31.5
3	P Watson	77	19	C Foster	31
4	D Davitt	54	20=	G Shacklock	30
5	J Cuthbert	53	20=	M Benns	30
6=	I Davitt	52.5	22=	J Bailey	28
6=	J O'Donnell	52.5	22=	J Williams	28
8	S Screen	48.33	22=	R Baggot	28
9	C Strachan	47	25=	B Lavis	25
10	J Cooper	46	25=	G Sharp	25
11	A Ball	44	27	S Willis	24
12=	J Carter	38	28	T Nicholson	23
12=	P Harris	38	29	F Rushby	22.5
14=	M Woolner	37	30=	J Flynn	22
14=	T Grey	37	30=	T Payne	22
16	K Faux	33.5	32	C Edge	21.5

SCOTTISH EVENTS, NEWBIGGING, Sep 7-8

Report by Jim Arnott

Paisley Trophy

A light Southeast breeze was a welcome start to the Paisley Trophy on Saturday September 7. The forecast was for this to freshen by lunchtime and a conservative 2:30 max was set. The Paisley Event is an all-in-open event, but as an Open Rubber model has such a performance advantage over glider and power, it is the obvious choice. Of the 8 entries, 7 flew rubber models, as did all four fly-off qualifiers. The wind did not freshen and conditions remained excellent throughout the day, making qualifying with a rubber model a case of "simply" avoiding any big mistakes.

In the flyoff Aubrey, Bruce, and Jim went at the same time and all climbed well. Brian Martin followed a minute later with a similarly nice climb. Aubrey's Skywalker had a problem on the glide however, turning so tightly that it threatened to spiral in. It lost height quickly and landed at 3:35. Jim's model had a prop misfolded and was also turning tighter than usual but was

holding on. It was going to be a very close call between the three models in the air. Jim's model landed on the treetops at 5:09, while Bruce's went down behind them at 5:12. A short time later, Brian's model glided down behind the trees for a winning 5:18 time.

1	B Martin	+ 5:18	4	A Beaton	+ 3:35
2	B Duncan	+ 5:12	5	D Price	6:44
3	J Arnott	+ 5:09			

The Cranfield Classic

The overnight weather forecast confirmed an expectation of strong east winds for Sunday September 8. I drove to the Newbigging through a violent thunderstorm convinced that there would be no contest. When I arrived, the road from Weston Farm down to the moor was a fast flowing river and a loch was developing at the gate to the field. Someone recommended a day's fishing as an alternative. However the rain stopped and the East wind was only some 20 mph. By moving forward to the brow of the hill and setting the max at 2:30, there was just enough room to squeeze flights in front of the trees. The contest was on, but a three round event was enough of a challenge.

There was a disappointing entry of 7, but all five of the Cranfield Classic designs were represented , and this year the Gloworm did not dominate the show. After two solid maxes with his G20 powered Ascender, Alan Brown had to switch to Mister Max for his third flight and put it into the biggest downdraft of the day for a 1:57 and third spot. A wayward climb resulted in a 2:17 first flight for Ewan Baxter-Jones' OS15 powered Gloworm. He then added two comfortable maxes for second place. George Blair had his new OS15 powered Lucky Lindy on song and it produced a winning full house.

1	G Blair	7:30	Lucky Lindy (OS15)
2	E Baxter-Jones	7:17	Gloworm (OS15)
3	A Brown	6:57	Ascender (ST g20); Mister Max
4	J Arnott	6:48	La Bestia (PAW249)
5	T McLaughlin	5:00	Gloworm (PAW249)

BRUMFLY, NORTH LUFFENHAM, SEPT 22

Report by Dave Hipperson, results in FFn last month.

The northerly wind gave the host club an opportunity to use a rather novel location at the very top edge of the aerodrome. A perfect spot giving peritrack access to retrieve, no serious obstacles downwind, mostly open fields and although some turbulence from the distant upwind trees nothing that ruined many flights. Some of it certainly destroyed the lift and made spotting it more difficult however.

Most of the club seemed to be engaged in running the event however those that were excused supported it strenuously by bumping up the power entries. This year the rather fiddly idea of rounds had been dropped in favour of contestants having to enter and complete at least one flight before 12 noon. This certainly encouraged some to start right away when otherwise they might not have, hoping the stiff breeze would moderate. It didn't, at least not for more than short periods after two heavy showers which came through in the afternoon when a number of people were able to squeeze maxes onto the field.

Turbulence caused the usually consistent Dennis Davitt to have a double pile in in CD'H but his total was still useful and on his last flight and in the same class Anthony Ball's distinctive and now quite elderly model still flying well also hit turbulence to tarnish his otherwise perfect score. As at the Southern Gala Tony Hall campaigned his effective TD049 ½A to good effect proving and hopefully encouraging others for the future, that they can compete against the F1Js.

Most of the full scores were power models and had Graham Shacklock not simply run out of time his Timide Mini Vintage would have been another and two for him as he had already qualified for Slow Open.

Although the wind had diminished slightly by the time of the flyoffs at 6pm the air was still rather cool, rough and unhelpful. Despite good patterns none of the power flights contacted anything like lift and the only long flyoff, that of Hipperson's in Open Rubber, didn't 'settle' until well off the 'drome. Despite this general lack of help Ian Davitt was still able to make a very respectable flight with his Senator ousting Simon Dixon's Bazooka in the Mini Vintage finale.

CLOUD TRAMP POSTAL CONTEST 2002

Aug 10 – Sept 30, by Jim Moseley (jjmoseley@look.ca)

My thanks to you all for taking part in this postal contest – whilst there are no fees or prizes for flying this simple model and the eventual positions are of little real consequence, the rewards lie in having fun in flying this basic little design (which can be capable of such surprisingly high scores) and ultimately comparing your efforts with the flights of others. 45 entrants this year, including four Juniors, is an encouraging comparison to that of 33 in the initial 2001 event, which actually indicates an upsurge in 'new' interest as many of last years' fliers did not return (a situation I'll try to rectify in 2003...), with entries from seven countries – and a special welcome to Argentina.

Last year Kermit Walker placed 2nd flying a competely stock CT fitted with a non-freewheeling prop; this year he replaced it with an 8" plastic f/wheeler and made a substantial increase over his previous score to move to the top of the list, flying from 8a.m. one morning in favourable conditions with little drift. Using 4 strands of 1/8" TAN2 20" long and winding to approx 1400 turns his final flight was a remarkable 220 seconds, the model landing in a distant ploughed field and flipping to hide the bright red 'visibility' trim on the upper tips ... took Kermit an hour to find it, as a result.

Mike Parker – organiser of the Grant Mimloct Mass Launch - flew on a local site in hot, breezy conditions, together with Ted Smales, Eric Bulmer and Peter Spence, all somewhat under-winding to keep the model within the bounds of the field. Their clubmate, Alan Train, flew his CT in a similar centralised event held by the Peterborough Club in warm, calm conditions – also enjoyed by Ken Norton, Dave Rumball, Bert Whitehead, Brian Lever, Geoff Stubbs , Tony Johnson and Jamie Lumsden who – at 8 years of age – placed well up the results list. As a note of interest another flyer at the Peterborough contest – one Mark Benn – chose not to

forward his scores to this Postal; had he done so he would have been a runaway winner with a three-from-five total of 534 seconds with all flights close to, or at, the three minute mark – great flying, no matter how you look at it.

Gordon Seymour flew at Tatton Park in Cheshire, with a model some years old and showing appreciable wear and tear – and also overweight; the fuselage once served as part of the VTO retract leg of a power model back in the '50s and is consequently of sturdy stock. Also in Cheshire, Stan 'Funf' Pearson was flying in a small field close to his home in the late evening whereas father-and-son team Pete and Alex Cameron flew on 'a glorious evening' at Epsom Downs, both using an 8" Peck prop swung by 4x1/8" TTAN2 @ approx 1200 turns; a contrast to the conditions in which Chris Behr flew out in the Arabian Gulf , 42C/+107F and windy. The extreme heat and high humidity rapidly perishes rubber motors and Chris destroyed his entire stock of same to complete his flights.

Jim Norfolk, flying in more moderate climes in Eastern Canada, is a CT afficionado in that he has flown variants that Charles Grant may never have thought of – besides the standard tractor configuration he flies it as a pusher, a tractor-pusher and even as a canard, all successfully. John Richards, also in the East, flew in warm, sunny but windy conditions ... in Ontario Les Sayer, wife Jean and grandsons Daniel and Ricky Millette flew their fleet of CTs at various times and places as opportunity permitted .. noteworthy that Jean placed highest in the listings? Mike Thomas has a CT flying so well that it's the first I've heard of to be fitted with a dethermaliser; I've watched flights on video where it climbs out like a Wakefield and cruises steadily until the stab flips down at around two minutes ... and I then ruefully look at my 'scores' ... I fitted a new prop bearing for the Mass Launch which proved to be too flimsy; any sidethrust added was straightened out by the tension of a fully wound motor, with predictable results....

In the Southern Hemisphere however, Graham Main – sole FF member of a R/C sport club – talked four others out to also fly his CT and reported that they really "enjoyed the change". Hopefully you might be tempted to build your own next year Rees, Steve, Aaron and Paul?? Also 'down under' Alan and Terry Tomlin, of the Brisbane FFS, flew in strong turbulent winds with ensuing long retrieves but commented that they 'had fun', a comment, which was echoed by Joseph Pengilley and many others. Incidentally, I've been flying a glider for many years with a BFFS decal on the wing ....

In Texas, Gerald Martin got Don Blackburn, Darrell Leachman and Key Crawford out to the field to participate though RC Oldtimers are their principal interest. Key, a former U/C flier, claims to know nothing about FF but still managed to be well up at 14th..... ; moving to California we had Art Swift, Don Martin and Don Smith -members of the Southern California Ignition Flyers - out at the 'Grassy Knoll' at Sepulveda Basin on a hot, clear, still day ... must be nice! From other parts of the world I was happy to receive times from my old friend Sven-Olov Linden of Sweden, and from Nucho Laspina and Carlos Rojo of Argentina; both countries have long histories of very active FF involvement but little is heard of such from Suth America these days and I hope that Carlos and Nucho will return and encourage other countrymen to join them.

Next year the Mimloct Mass Launch will take place on Saturday August 9 (at the time of writing this the 2002 returns stand at 259 participants, with names awaited for other reported fliers which might well bring the total to 280 .. and Mike Parker is still accepting registrations...) so accordingly the 2003 Cloud Tramp Postal will commence on that date and conclude on September 30. I hope you'll come back and fly again next year .. maybe bring a friend - remember, there's no BOM rule in this contest so a CT can be flown by numerous people. Thanks for your participation ... if you hadn't enjoyed doing so then you wouldn't be here, and having fun is the sole purpose of this whole idea; in return I enjoy running this postal and hearing from you ... let's do it again, bigger and better, next year.

45 flew

1	K Walker	USA	111	**94**	114	136	**220**	361
2	M Thomas	CAN	127	**91**	100	123	**190**	350
3	J Pengilley	USA	110	**120**	**84**	92	99	301
4	A Cameron	GBR	**90**	**110**	93	93	105	291
5	D Martin	USA	53	110	107	**122**	**47**	270
6	P Cameron	GBR	83	**73**	104	**120**	80	267
7	B Lever	GBR	99	**120**	**57**	87	65	251
8	J Sayer	CAN	56	**166**	**54**	97	76	229
9	C Behr	AUS	58	120	**38**	**120**	40	218
10	D Rumball	GBR	69	**79**	62	71	**62**	202
11	J Lumsden (8 yrs)	GBR	54	76	**51**	71	**88**	201
12	B Whitehead	GBR	**58**	63	63	**91**	73	199

RUBBER .WHY STRANDS?

By Dave Hipperson

I am supposed to be flying Power now but it isn't easy to make the break with the motive force that my models have used for the last three decades! To make it more difficult I seem to be being asked more and more questions on the subject of rubber models and motors in particularly. Usually it's to do with what I think the turns such and such a motor might take. I frightened someone recently by replying almost instantaneously. They asked what I based my estimate on and I was quick enough on this occasion to say "37 years of experience." Often it is not this easy. The reason it is usually difficult is invariably the person with the question doesn't have the necessary relevant data. This data is simple but crucial.

Comparison of turns needs us to all talk in the same units and those units are not strands. Please let us stop mentioning strands at all. After all, even if we all used the same nominal strip like the old traditional 1/4 x 1/24th (6xlmm) – which, of course, we don't - the cross-section varies in width and thickness both from hank to hank and along the hank, so the number of strands can never be assumed. In fact the modern rubber flyer now has a much wider choice of sizes from 3/32"(2mm) wide to 1/4" (6mm) wide in at least four incremental steps (not so long ago we even had 1mm square!) and that's before we add in the variations in thickness! I am constantly astonished when I see erudite and respected F1B flyers comparing motors and still referring to the number of strands in them.

The only variables apart from rubber quality (batch number) we need to consider are motor weight and length. Those two factors control everything. Nothing else matters; everything else simply confuses the issue. So when dealing with specific weight classes like CDH and F1B we need actually only concern ourselves with length - even simpler. Given this weight and length data you know the cross section no matter what variation in thickness the rubber that makes up the motor has. The cross section will always be a factor of length and weight. Furthermore you know the length which is useful when considering and comparing the turns possible which we all like doing.

In all the classes or rubber I fly my motors are weighed. I use a predetermined weight of rubber whether it be one of the three sizes of Open motors, one of the four sizes of Vintage motors or CDH. Motors all start life as a *weight* of rubber. This can be of any of the above thickness of strip but for convenience I tend to use the thinner gauges for the smaller motors. Then knowing the weight and length of the motor I can rely on all similar motors delivering a very similar maximum torque as long as I wind then to a similar number of turns each time - hence trim consistency. Incidentally I still use a torque meter to double check and also to spot mistakes like the wrong motor or a loop missed off the rear anchorage.

As we know any piece of rubber will behave in a certain way if made up into a single loop and very differently if made up shorter but into many loops. In fact the peak torque can be fairly relied upon - as long as type and quality of rubber are reasonably constant - as being directly in proportion to how short a motor we make up from any given weight of rubber.

How often do we still hear flyers bemoaning the fact that they put in a new motor and... 'The model went all tight on the climb and it was only the usual turns!"

Maybe it was, but was it the usual length? You can bet it was shorter than they had flown it on before. Or conversely you hear "After a couple of wind-ups I can get more turns on!"

Well what a surprise! Of course you can, the motor is longer than when you wound it the first time hence a smaller cross section. No, you haven't *run it in* either! It's just slightly thinner now as it has taken some permanent stretch.

Hence my motors of pre-determined weights are then made up into pre-determined lengths. Of course it is impossible to get each motor of the same class *exactly* the same length but the aim is to get as close as possible. In practice there have to be limits. Once I have established an ideal motor length I allow a maximum of 4% variation in length. This relatively close tolerance doesn't come without cost. It necessitates some motors being made up to odd numbers of strands. George Sharp has a very good way around this snag by ditching the odd strand and replacing it with a complete loop of half width rubber however that pre-supposes you have some 3/32" (2.5mm) or 1/8" (3mm) in stock or a rubber stripper with which to play. The odd strand system works if you haven't. Another dodge is to go right through the box you intend to use and see if one end might offer a slightly different cross-section than the other and hence change the finished length without recourse to odd strands. I usually do this for CDH motors, which are invariably made up from 3/32 (2.5mm) or 1/8" (3mm). However, in desperation I have been known to make them up as close as possible to the length required but short rather than long and then wind them up hard once not necessarily in the model. That usually brings them inside the limits! Larger motors, 60 grams and above, are usually made up from 3/16" (4mm) and odd strands arranged by tying a loop in the end of the rubber.

This weighing and making up to length has to be accompanied with a strict routine over use if it is to be effective. We have discovered comparatively recently that Tan II, unlike the FAI Supplies grey stuff of a decade or so ago or even Tan I, recovers its efficiency (i.e. it's ability to store energy and release it on demand) almost immediately. Realising this I have in the larger classes at least been using one motor for two or more consecutive comp flights! However what has to be remembered is that the length is only the length until you have given the motor a good bashing with the winder. Past 85% turns or so you can expect the rubber to take a certain amount of permanent stretch. Some of this will not be totally permanent and will disappear after a few days, however most of it will still be there for a few hours at least. Hence after a good wind a motor will be longer and hence take (require) more turns and behave slightly differently in the model if you use it again immediately.

If in doubt put each motor aside after use, bagged with the turns and condition noted and take a look at it at home after a week. At this time it can be checked for nicks, breaks etc. and measured and re-made up back to the required length if it has stretched appreciably. (This is usually the case with brand new motors. After use the stretch between wind-ups reduces to very little.)

Finally some turns figure which may be useful with a little interpolation for your own lengths. These are turns I actually achieve and apply to motors made from batches of Tan II bought between 1994 and 1997.

Motor weight	Makes up into a motor		
	Length ins	Length mm	Turns
10 grams	9.25	235	375
	9.50	241	400
	9.75	248	450
30 grams	28.5	724	950
	29.5	749	1100
	30.5	775	1250
40 grams	25	635	750
60 grams	34	864	950
	36	914	1100
	39	991	1250
100 grams	39-40	991-1016	900-950
110 grams	43	1092	900
	45	1143	1000
130 grams	43-44	1092-1118	950
	46-47	1168-1194	1100

CORRESPONDENCE

From Laurie Barr:

There is a lot of interest in the Vintage movement for large gliders designed in yesteryear. Many of them had parachute D.T's, which frankly work not very well.

In trying tip up tails, as is normal practise today, we find that they have a tendency to go into a spin, which usually causes much damage, to these non-carboned models. It has got to the point, where both Peter and I have had to rebuild our DT-damaged 12' span Thunderking fuselages, to include Spruce longerons.

I would like to ask any experts why only Gliders seem to have this problem. What is the best angle of tailplane tip? and why they do not always spin?

I have built another, stronger, fuselage for my Thunderking vintage glider, that kept getting damaged on DT. The construction details and dethermaliser arrangements on new fuselage is exactly the same as those on the T'King of Peter Michel. His model now DTs in a perfectly normal manner, but mine looped on DT all the way to the ground, sustaining yet more damage. Both models have the C of G at 60% back from the Leading edge, with tip up tailplane angles at 40 degrees.

Can anyone out in Free Flight land, explain why this should be so?, and suggest a remedy.

I have built hundreds of free flight models, with tip up tails, but have never before experienced this problem. I can of course try different angles of tip, but each time I get it wrong, the model suffers major damage, and I want to take any advice that is forthcoming!

We do not want to go back to Parachute DTs, as they are largly ineffective, and reducing their angle of tip seems to be the next step, but we have both experienced spinning problems before with this, causing damage!

From Newham Beaumont:

A cry for help from Alain Roux and the other organisers of the Poitou F/F International.

The concern is at the dwindling number of volunteers to time-keep, particularly for the F1A event. This year some poles had to make do with a single timekeeper. A particular aspect of the problem is that there are not so many who are prepared to time for a whole day.

At a general meeting of the Thouars club last Frifday, the issue was discussed at length and a number of ideas aired. Members were urged to each find one volunteer and the possibility of reducing or waiving entry fees for volunteers was also mooted, but no large rabbits were pulled for the hat.

In conclusion it was agreed that the organisers of similar events in other countries should be contacted to find out if they have similar concerns and to see how they manage. I should be grateful therefore if you could air this matter through the UK F/F tech. committee (and any other bodies that might help). For example, would it be practicable to ask all UK entrants to pledge one timekeeper each for Poitou ?

From Ossi Kilpelainen:

Re Andy's Poitou report. Jari Valos' timer is not electronic. It's a mechanic "time machine" by Victor Tchop:

-2 speed, some 60 % faster for the first seconds, then slows down

-7 happenings (like Jari says, not functions)!

Note also that Jari Valo has been very successful in CL for years:

Speed: EC79 - 4, EC91 - 13, WC92 - 12, EC95 - 10, WC95 - 56, WC02 - 13

Combat: WC90 - 6, WC92 - 12, WC94 - 10, WC98 - 4

From Ivan Taylor, re Mike Woodhouse's comments in October BMFA News:

"Cannon fodder" remarked John Cuthbert. "Buy the best or be cannon fodder." Spot on - I agree entirely. I should burn my own models and send a cheque to Mr. A. I know that's what I need to do to be competitive in FIB. I look at these wonderful models and desire them greatly, just as I do that Ducati or TVR or as I admired the craftsmanship of a repaired JOD propeller many years ago. In our room in Hungary John Billam showed me his grandson Daniel's Vivchar model and I tried to convince myself that, like many great flyers such as Russell Peers and Mike Woolner, I must take the plunge and move on.

The "serious problems" with my models at the E.C, to which Mike Woodhouse referred in his BMFA News column, amounted to the fact that I had badly damaged one model in test flying but the three others were flying well. I therefore withdrew from the W.C. event in order to avoid risking models. The suggestion that was made to me to process one of John Billam's models as a back-up also seemed to make sense in view of the importance of the occasion.

In the first round of the European Championships I did not manage the 5 minute supermax but I then did 3 maxes. On the fifth round I had a motor explode while I was waiting to fly. John's model had been prepared as a back-up and he dearly wanted me to fly it - after all this model was one of his own creations. I too was eager to fly it for it was very exciting to be able to throw it so hard with DPR and it meant that I might finally be able to break away from this silly idea that you can't have fun and it just isn't right to fly someone else's model! It maxed and I used it again for Round 6, finishing off with another max with my own model - John's was not used for three flights as Mike stated. I would like to thank John Billam for his generous offer at the Euro Champs, which may have helped me, and of course the team, to have a slightly better result.

It was a very enjoyable contest for me and had I been successful in the first (5 min) round, I would have stuck with my models, but obviously all chance of success had gone. I certainly had no intention of flying anything in the first round other than my own model, against John Billam's wishes - bless him. I did my best, the highest point coming probably in Round 6 when my violent launch of John's model split my shorts and I have it on good authority that the timekeeper's daughter fainted!

Then - more looking at Vivchar models, discussion of a deal for, say, 4 models or more, serious murmurings about getting the best manufacturers' models, etc. OK - it's on the cards - frill ex works models - no messing.

Then I got home and thought "What if I put wing wigglers on my models?" Slightly longer motors and a bit less pitch. I made my own bits, went trimming with Russell and yes, there was a definite improvement, great fun and "built in satisfaction". A stable of ready trimmed perfect models? Not just yet, thanks.

I have never made my thoughts a personal attack and have high regard for all flyers, but can't clap so loudly for winners who just buy their models, although I do respect their decision to do so, and I myself would not expect to be clapped so loudly by those who share my views if I achieved a win using a model which I had bought or borrowed. I really think it has ripped the soul out of the lovely game.

If I do buy or borrow models to be competitive in FIB it still will not alter my view on dropping the BOM rule, but I really think I will enjoy building the majority of the model myself, even at the expense of being cannon fodder. "At the Crossroads"? Yes, maybe, and after our brief conversation on the ice after the contest in Norway, for Mike too.

VILIM KMOCH

The Croatian Aero Club has passed on the sad news that Vilim Kmoch died suddenly on October 18th. While more recently he has been Croatian Delegate in CIAM, we remember him particularly as an F1B and F1D flyer for many years. His first appeareance in a World Champs was flying Wakefield at Weisbaden in 1955, followed by Power at Cranfield the following year, a pattern followed during the sixties, flying mainly F1B or sometimes F1C in each Championship from 1961 to 1975, reaching second place in F1B in 1971. This was in parallel with flying indoor from his first world champs in 1966, missing only a couple of events between then and 1982. His final championship appearance was in the 1987 F1D European Champs. Such a friendly knowledgeable flyer will be greatly missed.

NFFS 2003 SYMPO CALL FOR PAPERS

The National Free Flight Society Symposium 2003 needs your help. We are looking for technical papers on the science of Free Flight as well as articles on design, construction, and flying. If you have a possible topic and are interested in sharing your knowledge and experience with modelers around the world, please contact 2003 Sympo Editor Louis Joyner.

Louis' e-mail address is joyner28@comcast.net. A short (25 to 50 word) outline of the proposed paper is all that's needed at this time. Please include this in the body of the e-mail, not as an attachment. The mailing address is: Louis Joyner, 2003 Sympo, 6 Saturday Rd., Mt. Pleasant, SC 29464, USA.

Lee Hines is the chairman of the Models of the Year committee. His e-mail is sweepettelee@earthlink.net.

BRITISH PLANS FOR '03 WORLD CHAMPS

With the aim of avoiding some of the recent problems caused by last-minute planning I have been appointed pro tem team manager for 2003. So I can start work as soon as possible, would those of you planning to attend the Championships as supporters please let me know your intentions regarding travel, accommodation and entry in any World Cup contests before or after the Championships.

The probable date for the World Champs is 26th or 27th of July - 1st of August *(Ed: dates will be announced next month)* and the Voros Jeno Memorial World Cup will be on the 2nd and 3rd of August. I have no information on the Puszta Cup, which this year immediately preceded the Championships, but I imagine it will take place.

I intend to start investigating accommodation options (with some flexibility at this stage) and would like to have an idea of numbers before Nov. 14th please. I can be e-mailed at: martindilly@compuserve.com, phoned or faxed on 020 8777 5533 or written to at 20, Links Road, West Wickham, Kent BR4 0QW. I will also try to obtain the best ferry deals for those going by road, as I did this year, so please let me know if you are interested.

INTERNATIONAL COMPETITION NEWS

HOLIDAY ON ICE World Cup event will be at Gjovik in Norway on March 22-23. The competition will start at 9.00 on Saturday after briefing at 8.45. First round max will be 210 for F1A and F1B and 240 for F1C "not supermax". Five rounds, jury will decide maximum and length of rounds according to weather and retrieving conditions. If the weather or retrieving conditions become difficult, the competition can be run over two days, March 22-23. The competition takes place on a frozen lake. There is the usual reminder that warm waterproof boots will be required on the frozen lake.

Headquarter for the competition will be Hovdetun Youth Hostel, Gjøvik. The organizers will be at the hostel from 1600 on March 21, tel + 47 61171011, mobile + 47 9056 0003. Lodging and meals may be booked at the youth hostel, with other hotels in the vicinity as alternatives for direct booking. Note that you cannot use your own sleeping bag at Norwegian youth hostels - please bring your own bedlinen or you will have to pay 50 NOK to rent bedlinen. Youth hostel lodging and meals must be booked through organiser but paid direct to the hostel. Bed and breakfast cost is NOK 230 per night, or NOK 570 from Friday evening to Sunday morning including B&B, packed lunch and Saturday evening dinner.

Entry fee is NOK 250, or NOK 350 for two or more classes, which may be paid on arrival, but entries should be sent before March 16 to Tor Bortne, Jernbanev 28, N-2840 Reinsvoll, Norway. Other contacts are Tor Bortne (tel +47 6119 7463, fax +47 6119 8351, e: margit.bortne@c2i.net), or Vegar Nereng (tel +47 6119 6736, fax +47 6115 2606, e: vnereng@online.no), Svein Olstad (tel +47 6119 6764 e: svein@c2i.net) or Ole Torgersen (tel +47 6119 2585, e: o.torg@frisurf.no).

This year there will also be an event for the mini classes "Smalliday on ice". Skedsmo Modelfly Klubb invites all to this "add on" competition on Sunday March 23. The classes to be flown are F1G, F1H and P 30. There will be 3 rounds with start at 11:00 and fly off rounds will start at 14:30. If the main Holiday on Ice contest is postponed to Sunday, it will have precedence over the Small Class Contest. Entry Fee will be NOK 100 per small class in addition to the main competition. There will be separate junior prizes. Contact: Atle Klungrehaug, email aklark@online.no The basic P30 rules to be used are:

- max wing span and length of fuselage:30", 762mm
- max weight of rubber motor: 10 gram
- commercial 9.5" plastic propeller shall be used.
- no additional rules will be enforced.

UK COMPETITION NEWS

COUPE EUROPA 2002. Pre-entry forms for the Coupe Europa on Dec 1st at Middle Wallop are now available from David Beales at 7, Crooms Hill Grove, London SE10 8HB or on 0208858 2714 or e-mail; bealesw@aol.com. Pre-entry will save you money and time on the day. Events will be F1G and Vintage Coupe d'Hiver plus the Europa Trophy for F1G team and the fun starts at 10am, with an indoor prizegiving and celebration after the event.

Pre-entry costs £3 (€5) per class, or £5 on the field, and there will be the usual £5 admission charge to the airfield. Organisation will be by Croydon & DMAC. For pre-entered overseas flyers fees can be collected on the field.

CHOBHAM TREE CHOP

From Geoff Smith:

This annual series of events on a different format this time around. Since the vast majority of free-fighters at Chobbam are in total or partial retirement it was suggested to the Countryside Warden that a weekday might attract more volunteers than Sundays have over the past 15 years or so. The first date, Monday 14th October (agreed too late to put in the model press) resulted in 13 enthusiasts, as many as we have had on Sundays in previous years. The warden is keen to see the good work continue and has agreed the following dates:

- Monday December 16th (free Christmas tree if you wish!)
- Monday January 13th
- Monday February 10th

Meet in the Clump car park at 10.00 a.m. and finish 12-12.30 p.m. Your efforts will be most appreciated and the self-interest will ensure that the FF zone at Chobham remains reasonably tree free.

FF WORLD CUP FINAL POSITIONS

The F1A winner was Jari Valo of Finland, his victory clinched with a win at Castilla La Mancha in September following his win at Poitou the previous month. Second place was taken by Stefan Rumpp, many times winner of the World Cup, third by Damjan Zulic of Slovenia and fourth by Phil Mitchell (Australia). These three each had two wins and a second place, with the final order decided by bonus points.

F1B was won by Ivan Kolic, the 2000 World Cup winner, with three wins, the third of these was in Spain. Andrei Khrebtov and Igor Vivchar took second and third place respectively with the same number of points from two wins and a second place. The order was decided by comparing their fourth event, with the narrow margin of Andrei's third beating Igor's fourth place.

The F1C victor was Gerhard Aringer (Austria) with three wins ahead of last year's winner John Cuthbert. John also had three wins, but Gerhard was the clear winner on bonus points as a result of his win at the Puszta Cup, the largest competition of the year. Third place was taken by Eugene Verbitsky with two wins and a second place.

Key to contests F1A, F1B, F1C

MM	Maxmen	USA	AN	Antonov Cup	UKR
BC	Bear Cup	FIN	HC	Huron Cup	CAN
HL	Holiday on Ice	NOR	SC	Scania Cup	SWE
KU	Kotuku Cup	NZL	DK	Nordic Cup	DEN
OM	Omarama Cup	NZL	PZ	Puszta Cup	HUN
VT	Matfors VT	SWE	VJ	Voros Jeno	HUN
AC	AFFS Champs	AUS	PT	Poitou	FRA
SN	Southern Cross	AUS	EF	Eifel-Pokal	GER
BL	Baltic Cup	LTU	IS	Israel Champs	ISR
SV	19th Srem Cup	YUG	CC	Canada Cup	CAN
EM	Nat Champs	ARG	AV	Aviaprom Cup	RUS
JP	17th J.Pohar	CZE	SH	Stonehenge	GBR
NC	Novohrad Cup	SVK	CM	Castilla-La M	ESP
VH	Von Hafe Cup	POR	DZ	Djordje Zigic	YUG
PC	Prilep Brand	MKD	SR	Sierra Cup	USA
VB	Verbitsky Cup	UKR	KC	Krka Cup	SLO

F1C WORLD CUP RESULTS

1	G Aringer	AUT	161	PZ-1	EF-1	CM-1	PT-4			
2	J Cuthbert	GBR	153	PT-1	VT-1	NC-1	HL-2	EF-4	PZ-11	
3	E Verbitsky	UKR	146	AN-1	SR-1	VJ-2	MM-7	VB-1	PZ-3	
4	R Summersby	AUS	132	SN-1	AC-1	AN-3	VB-6			
5	R Truppe	AUT	125	KC-1	PT-2	SH-3	VJ-4	JP-5	PZ-8	
6	S Screen	GBR	117	SH-1	MM-2	PT-6				
7	Z Szablewski	POL	117	SC-1	DK-1	PZ-14				
8	J Roots	EST	107	BL-2	VT-2	PZ-6				
9	C Gretter	GER	103	EF-2	JP-3	NC-3	BL-4			
10	M Roman	POL	100	JP-1	PZ-2					
11	S Katyba	UKR	98	KC-2	PZ-4	AN-4	VB-5			
12	B Gutai	USA	94	HC-2	CC-2	MM-12				
13	K Kuukka	FIN	91	HL-1	BC-2					
14	T Niiranen	FIN	82	BL-1	HL-3					
15	G Zsengeller	HUN	82	SV-1	EF-3					
16	C P Wachtler	GER	81	JP-2	EF-6	PZ-12				
17	D Thomas	AUS	80	SN-2	AC-2					
18	P Watson	GBR	75	SH-2	PT-3					
19	N Riokhin	RUS	72	VJ-1	AV-7					
20	R Naaber	EST	70	BC-1	BL-6					
21	A Lindner	GER	65	SC-2	HL-4					
22	F Parker	USA	54	MM-1						
23	D Joyce	USA	54	MM-3	SR-5					
24	J Opevalov	RUS	53	AV-1						
25	M Zito	ARG	51	EM-1						
25	E Keck	USA	51							
27	A Kirilenko	USA	50							
28	R Barbulovski	MKD	50							
28	J Boyd	NZL	50							
30	M Cantos Luna	ESP	50							
30	U Zilbershtein	ISR	50							
32	G Venuti	ITA	46							
33	D Babenskas	LTU	44							
34	A Kislovsky	RUS	42							
35	I Andriushenko	UKR	42							
35	A Babenko	UKR	42							
37	P Ball	GBR	41							
38	K Faux	GBR	41							
39	D Galbreath	USA	41							
40	M Reverault	FRA	40							
41	K Oliver	USA	40							
42	E Furferi	ARG	40							
43	R Seinauskas	LTU	40							
44	K Stojanovski	MKD	40							
44	P Smith	NZL	40							
46	M Nogga	GER	34							
47	M Levente	HUN	33							
48	L Chuchukalov	RUS	32							
49	V Semenyaga	UKR	32							
50	E Carroll	USA	31							

F1A WORLD CUP RESULTS

1	J Valo	FIN	155	PT-1	BC-1	CM-1	BL-2	HL-7	VT-7		
2	S Rumpp	GER	146	DK-1	SR-1	JP-2	EF-4	PZ-9	SH-8	SC-8	
3	D Zulic	SLO	142	PC-1	DZ-1	MM-2	SV-2				
4	P Mitchell	AUS	140	SN-1	OM-1	AC-2	KU-3				
5	P Findahl	SWE	137	VJ-1	AN-2	BC-2	HL-9	VT-9	SH-21	VB-2	
6	A van Eldik	NED	123	KC-1	DK-2	SC-3	SH-7	PT-17	JP-20		
7	V Stamov	UKR	123	AV-1	AN-1	AC-5	KU-6				
8	B van Nest	USA	120	KU-1	CC-2	AC-3	SN-4	SR-10	MM-22		
9	S Makarov	RUS	119	HL-1	AV-2	VT-4	PZ-20	MM-21	VJ-24		
10	P de Boer	NED	107	HL-2	CM-2	EF-5	VJ-7	NC-13	SH-15		
11	F Kerner	HUN	97	NC-1	SV-4	VJ-8	EF-17				
12	K Kulmakko	FIN	96	VH-2	VJ-4	HL-4	BC-4	CM-4			
13	V Morgan	AUS	90	SN-2	KU-4	OM-4					
14	H Fuss	AUT	89	PZ-1	PT-9	KC-14	JP-20	VJ-11			
15	G Aringer	AUT	87	JP-3	HL-3	EF-7	SH-10				
16	F Hofmann	GER	86	SC-2	SH-3	DK-12					
17	B Trachez	FRA	85	PZ-4	DK-3	JP-7	SC-13	SH-19			
18	M van Dijk	NED	84	EF-2	VJ-6	MM-10	HL-14	SH-13	PT-22	PZ-24	
19	V Lazarevich	UKR	83	PZ-2	VB-4	AV-17	AN-16				
20	B Zulic	SLO	81	KC-2	DZ-2						
21	M Tica	YUG	80	SV-1	PC-5	KC-16	DZ-5				
22	C Lenartowicz	CAN	80	HC-1	CC-3						
23	M Gruneis	AUT	78	VJ-2	EF-11	NC-10	KC-15				
24	M Kosonozhkin	RUS	76	IS-2	SH-9	HL-12	PZ-18				
25	M Lihtamo	FIN	73	SC-1	HL-15	DK-15	BC-19				
26	D Halbmeier	GER	72	EF-1	VJ-12						
27	T Isotalo	FIN	71	BL-1	BC-9	HL-23					
28	I Kreetz	NED	70	VH-3	PZ-8	PT-12	EF-21				
29	B Nyhegn	DEN	70	SH-2	PZ-17	HL-13					
30	R Sifleet	USA	69	HC-2	CC-5	MM-17					
31	M Kochkarev	RUS	67	VJ-5	AV-5	MM-5					
32	V Croguenec	FRA	63	PZ-3	VH-4						
33	M Bucko	SVK	62								
34	J Voros	HUN	61								
35	I Yablonovsky	UKR	60								
36	W Mcgarvey	NZL	60								
36	R Wallace	NZL	60								
38	M Cuthbert (J)	GBR	59								
39	I Szentpeteri (J)	HUN	58								
40	P Allnutt	CAN	58								
41	J Zagorac	YUG	58								
42	C Edge	GBR	57								
43	D Lakic	YUG	56								
44	J Carter	GBR	56								
45	R Blagojevic	YUG	55								
46	D Faraji	ISR	54								
47	J Vosejpka	CZE	54								
48	V Poliayev	RUS	54								
49	A Szekelyhidi	HUN	53								
50	A Persson	SWE	53								
51	T Weimer	GER	52								
52	S Spence	USA	52								
53	J Williams	GBR	52								
54	L Leino	FIN	52								
55	R Lavrinov	UKR	51								
56	A Neyra	ARG	51								
57	B Ryz	CZE	50								
58	S Wivardsson	SWE	50								
59	M Thomas	AUS	50								
59	C Markos	USA	50								
61	V Pisanny	UKR	48								
62	A van Wallene	NED	47								
63	F Moreau	FRA	46								
64	E Galor	ISR	45								

F1B WORLD CUP RESULTS

1	I Kolic	YUG	165	PZ-1	EF-1	CM-1	KC-2	SV-3	PC-3	AV-5	SH-5	
2	A Khrebtov	RUS	143	KU-1	OM-1	SN-2	AC-3	PZ-10	AV-6			
3	I Vivchar	UKR	143	SN-1	AC-1	OM-2	SH-4	MM-5	PT-6	KU-5	AN-9	SR-10
4	D Zulic	SLO	126	SV-1	PC-1	PZ-7	KC-4	MM-6				
5	P Ruyter	NED	120	JP-2	SH-2	MM-3	SC-8	PT-14	EF-19	HL-18		
6	A Zeri	NED	119	PT-1	EF-3	VH-3						
7	A Andriukov	USA	118	HL-1	PZ-2	SR-11	MM-18	VJ-11				
8	M Woolner	GBR	117	VJ-1	HL-2	SH-7						
9	A Zastavenko	UKR	115	VB-1	AV-3	PZ-4						
10	O Kulakovsky	UKR	114	MM-2	AN-2	PZ-6	AV-8	VB-5				
11	R Blackam	AUS	113	SR-1	AC-2	SN-5						
12	B Silz	GER	102	DK-1	SC-4	NC-4	EF-5					
13	V Rosonoks	LAT	102	VT-2	NC-2	HL-8	EF-10	BC-8				
14	Y Waltonen	FIN	98	CM-2	BL-3	DK-4	BC-6	PZ-13	HL-10			
15	A Shelepov	RUS	98	AV-2	SN-3	KU-4	AC-6	OM-7				
16	S Tedeschi	FRA	98	VH-1	VJ-4	CM-5	PT-9	JP-14	EF-24			
17	R Khouziev	RUS	97	PZ-3	VT-3	AV-4	DK-5	HL-22	SC-3			
18	B Piserchio	USA	95	VJ-2	SR-3	PT-7	MM-20					
19	A Broberg	SWE	92	SC-1	DK-2	VT-8						
20	B van Nest	USA	88	KU-2	OM-4	VJ-6	AC-7					
21	B Russell Peers	GBR	84	SH-3	NC-3	HL-7						
22	S Stefanchuck	UKR	83	EF-2	HL-5	AN-11						
23	H van Hoorn	NED	78	PT-2	CM-4	VJ-17	EF-24					
24	W Ghio	USA	77	CC-3	HL-4	SR-7						
25	V Racko	LAT	71	BC-1	BL-6							
26	D Blackam	AUS	71	AC-4	SR-4	SN-6						
27	R Durendez	ESP	70	VH-2	CM-3							
28	J Isotalo	FIN	68	BL-2	BC-7	HL-19						
29	H Broberg	SWE	66	VT-1	HL-13	SC-5						
30	A Bukin (J)	UKR	65	PZ-8	AN-7	KC-6	EF-11	HL-11	VJ-16			
31	L Gircys (J)	LTU	64	BC-4	VT-5	BL-8	EF-17					
32	V Vivchar	UKR	64									
33	A Seifert	GER	63									
34	T Sarpila	FIN	63									
35	J Malkin	NZL	62									
36	A Kutvonen	FIN	61									
37	V Starostenko	UKR	61									
38	A Shagun	UKR	60									
39	S Gostojic	YUG	59									
40	E Crins	NED	57									
41	L Horak	CAN	57									
42	J Lueken	USA	55									
43	C Jones	USA	55									
44	H Schoder	SUI	54									
45	V Urban (J)	CZE	53									
46	V Afanasjev	RUS	53									
47	B Spooner	GBR	52									
48	Y Blazhevich	UKR	52									
49	B Bijelic	YUG	51									
50	H Indrek	EST	51									
51	R Mackus	LTU	51									
52	J Mcglashan	CAN	51									
52	J Fernando	ARG	51									
54	M Woodhouse	GBR	50									
55	B Eimar	SWE	50									
56	J Fitch	USA	50									
57	M Lovato	ITA	50									
58	J Clapp	USA	50									
59	B Lacimic	YUG	50									
60	R Lucassen	NED	48									
61	V Ivancikas	LTU	46									
62	V Man	ISR	44									

FFN SUBSCRIPTIONS

The FFn subscription renewal form is printed overleaf. In connection with this form, the following is a list of all those readers whose subscriptions expire later than December 2002, including payments received and processed by October 26th. The expiry date is given as year (last 2 digits) + month (eg 0306 is June 2003). Subscriptions that expire during 2003 can be extended to the end of 2003 by payment of a pro-rata fraction of the rate for the full year, with the possible addition of a full year subscription to continue to the end of 2004 if you prefer. Alternatively, you may pay the standard annual subscription to cover 12 issues from your expiry month.

0312	N Allen	0308	H Feller	0304	K Leissner	0402	K W Salzer
0312	D Anderson	0312	P Findahl	0404	Niv Levy	0312	A C Schlosberg
0506	T Andre	0307	I Fitzpatrick	0312	P Lumsden	0312	P Seeley
0312	J Andrews	0304	Gerard Robert	0312	R Mackus	0312	Susumu Shibata
0310	P Arnould	0310	M Gewain	0312	R Marking	0304	P A Siddall
0312	B W C Aslett	0402	W Ghio	0312	P Martin	0407	D Siebenmann
0312	J H Bailey	0312	Luca Gialanella	0402	G Maynard	0310	G W Smith
0302	P Ball	0312	K Gibson	0312	R A Mazzocco	0303	P Soave
0312	Didier Barberis	0304	G Gilkes	0302	W H Mcgarvey	0312	J B Spooner
0709	C G Barrett	0303	A Goddard	0301	J Melde	0307	M Stagg
0312	G Batiuk	0404	V Greimel	0312	S Milan	0304	I Steffensen
0310	W Beales	0312	P Hall	0303	J F Minshull	0405	C Stout
0312	M Benns	0312	N Hall	0312	M Molton	0302	D Sutcliffe
0407	C W Bogart	0312	P R Harris	0404	A J Moorhouse	0307	R Sutton
0304	N J Bosdet	0304	P J Harris	0312	M Mulligan	0307	Heikki Tahkapaa
0312	B Boutillier	0312	J B Harte	0312	F Nielsen	0312	D S Taylor
0401	C N A Breeman	0301	D Hearn	0305	W Nimptsch	0301	I Taylor
0403	P Brocks	0312	H Helmbrecht	0312	Minoru Nishizawa	0312	D E Thomas
0312	H G Brodersen	0412	G Herzberg	0605	H Nitsche	0303	J D Thompson
0312	Cavalloni Klub	0312	S Hinds	0304	G Nocque	0302	Chosei Tono
0312	A D Chamberlain	0312	D Hipperson	0310	T Oxager	0312	O Torgersen
0303	T B Chambers	0301	W Hodkinson	0306	N Parry	0304	Turk Hava Kurumu
0304	P Chaussebourg	0310	K Hoover	0312	T F Payne	0312	G Turnbull
0312	M Cook	0312	I Horejsi	0303	J C H Pennington	0301	T Van Eede
0312	J Cooper	0312	H Hutchings	0410	N Persson	0309	A P De Visser
0312	R Critchlow	0308	D Iele	0304	G Pink	0404	U A Wannop
0312	J R Cuthbert	0312	T G Ioerger	0309	J Pope	0501	J Wantzenreither
0312	Akihiro Danjo	0402	A J Italiano	0304	E Purcell	0312	J H White
0305	D Davitt	0312	P Jellis	0604	Ra'anana Aero Club	0403	F Wilkening
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0312	D Dolzinski	0312	G Kent	0401	F Rapin	0401	M J Woodhouse
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