Free Flight news FFn

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An FFn subscription renewal form is included with this issue on pages 127 & 128

DIARY

November 3-4 Mühlenthurnen, Switzerland	Euro-Fly WORLD CUP F1A, F1B, F1C, F1G . Entry: CHF50. See FFn 0105. Contact: W Eggimann, Seftigenstrasse 125, 3123 Belp, Switzerland, tel: +41 31 819 17 84, fax: +41 322 39 04 , Email: walter.eggimann@bbl.admin.ch,
November 8-11 Vojka, Yugoslavia	Memorial Aleksandra Scepanovica F1A, F1B, F1C, F1G, F1H, F1J. Entry US$9. Contact: Mrsovic Milos, Srpskih Vladara 26, 11000 Beograd, Yugoslavia, tel: +381 11 686 618, fax: +381 11 659 705.
November 25 Holiday Inn, Coventry	BMFA Free Flight Forum 2001. See details in October FFn, page 107. Start 10am.
December 2 Middle Wallop	SAM 1066 King Harold Cup and Hastings Trophy for F1G and vintage CdH. Start 10am. Contact: D Beales 0208 858 2714.
December 2 Middle Wallop	SAM 1066/Crookham Combined Power and Combined Glider. Start 10am. See UK Competition News in this issue. Contacts: Power J Thompson, tel: 01252 842471, email: Johnd.Thompson@btinternet.com, Glider: R Audley, tel: 01454 250354, email: rodaudley@hotmail.com. Also check the following web sites for last minute changes. SAM 1066: www.cavgrove.freeserve.co.uk/sam.html Crookham: www.cavgrove.freeserve.co.uk
December 29 Saturday Church Fenton	Coupe International 2001. 80g, 100g and vintage Coupe. See FFn 0109. BMFA members only. Must be on security list (Joe Northrop 0113 2581292). Contact D Davitt, 0113 2675433.

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

FFn

Please note that a subscription renewal form is included as the back page of this issue. The NFFS Symposium Report 2001 is not yet available but it can be ordered from FFn at the same time as renewing your subscription. Copies of the report have only just been sent from USA so I expect to be able to supply copies at some time during December (no absolute guarantee that it will be in time for Christmas!).

WORLD CHAMPIONSHIPS F1A, F1B, F1C LOST HILLS, USA, OCTOBER 8 TO 14

Report by Ian Kaynes

Eighteen months ago the CIAM had accepted the USA offer to host these championships. For seventeen of those months everything progressed towards another Californian free flight festival, then the world events in September drew a shadow over this expectation. The AMA and SCAT Club determined to continue the championships and on October 8th they were rewarded with the arrival of most of the expected competitors. China and Croatia teams did not come and some individual competitors chose not to attend, but the only clear casualty of the security clampdown was that the Bosnian team were not granted visas to enter the USA. Years ago there had been an FAI rule that if a team was prevented from entering the country then the championships were void, but the FAI General Section now just requires that the organisers make every reasonable effort to ensure admission into the country. The AMA and SCAT did everything possible to obtain admission for the Bosnians but unfortunately failed.

Twenty nine countries were represented and the number of competitors in each class was almost identical with those in Israel in 1999, which itself had been about 20% down on the preceding world champs in Europe

The Canada Cup World Cup event had been held at Lost Hills just before the champs began and, as usual for an event at such a time, there was a very large entry. It gave competitors a good chance to get used to competition on the field but the organisation was rather different, particularly with no timekeepers supplied and several people flying at once at each pole. In fact, apart from the trophies which were presented after the Champs opening ceremony, there was not a lot supplied for the entry fee.

For the World Champs most competitors were accommodated in motels at Lost Hills and Buttonwillow, with the high demand forcing the price up from the typical $31 starting price to the $55 which had to be paid for a champs double room. A small packed lunch was provided on the field, there was the opening barbecue and final banquet, but no other food was provided and meals had to be purchased in the local restaurants - for a rather higher price than the $20 per day which had been estimated to CIAM. Water was provided but plans to sell beer were thwarted by the lack of a licence - so it was given away in return for donations!

Processing took place in a large tent on the field, starting on Monday, which was the nominal arrival day, and continuing on Tuesday. It was done so efficiently that it was completed well before the end of the second day, with very little waiting time for each team. "Processing" currently involves checking that the four models of each competitor have the required markings (national abbreviation, competitor licence number and individual model identification numbers/letters) and putting stickers on the models to signify that they have been registered. The models, motors and towlines are no longer weighed or measured at this stage, but the official equipment was available for anyone to check models for themselves.

The opening ceremony was in Wasco, about 20 miles from Lost Hills, one Tuesday afternoon followed by a barbecue and team managers meeting. One specific rule explained at the meeting was the rule adopted by CIAM from 2002 but added as a special condition on this champs: the rule classing a flight as an attempt if under 20 seconds only applied if the model did not DT. The field rules included keeping spectators and motor bikes from the starting line. The bikes could be used for retrieving but it was forbidden to ride in circles to generate lift under models – compliance was periodically checked by downwind observers on bikes. Any flapping had to be on foot.

Wednesday was the first competition day for F1A gliders. Everything was ready well in advance of the scheduled start at 8.00. As expected the first round had slightly buoyant still air and a good number of gliders made the 3.30 max with a little time in hand.

At the end of the round there was the one and only tiny problem in the field organisation: the timekeepers had not been briefed to take the cards along to the team's pole for the next round. It was all solved in five minutes and thereafter there was not the slightest faltering in the smooth running of the event. The SCAT club wives were running the scoring - calling scores from the line by radio to both the computer room and the display scoreboard. It was all incredibly up to date and accurate.

F1A round two started with some light lift then there was a long dead spell of almost 30 minutes before regular daytime lift began to appear. This steadily grew until becoming treacherous during the afternoon. At the British pole Anthony Ball was first to stumble, in round 4, followed by John Williams dropping a few seconds in round 6 and a lot in round 7. Chris Edge successfully made it through the rounds, as one of a total of 41 competitors.

The five minute flyoff round was flown at 17.00, with the weather still warm and models finding strong lift at the start of the round. With a few stragglers finding lift later, this round removed only two from contention. The remaining 39 gathered to try for seven minutes in much cooler, steadier conditions at 18.00. A few people towed upwind, others circled just downwind of the line and most had launched by about seven minutes into the ten minute round. There were a few still circling until late in the round. Van Dijk notably launched his model upwind and as the black and green undersurfaced model drifted across the line it was obvious that the air was good. Findahl and Kreetz was also flying late and making promising flights. When the scores came in Per Findahl and Maarten van Dijk had both maxed, with Ivo Kreetz dropping just 7 seconds for third place - particularly impressive for a model without bunt.

There was thus to be a two-man flyoff the following morning, evoking clear memories of the same Lost Hills situation in 1993 when Mike Fantham won.

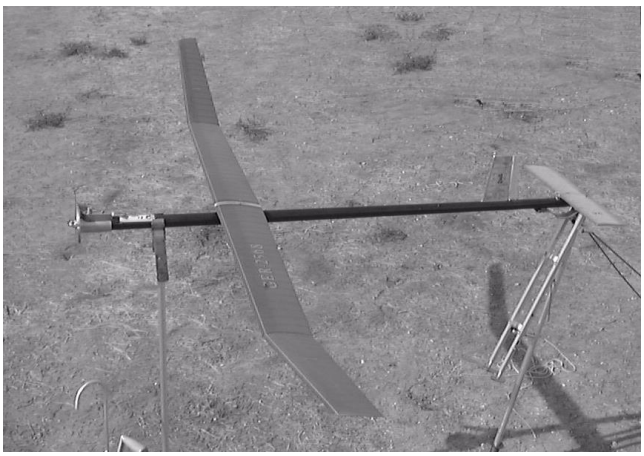
In the morning everyone walked across to the top of a slight rise to give the best possible view downwind and the flyoff began at 7.15. Both flyers went straight into the air and towed around for several minutes testing the air. It was seven minutes before Maarten launched and 18 seconds later Per put his model up beside him. As they drifted downwind Per had the slightly wider circle and eventually could be seen to be higher than Maarten. As far as it was possible to see the models before they landed, it looked as though Per had the better flight. The timekeepers had seen the models down and the times showed that Per had indeed taken the title, with s maller margin recorded than suggested by downwind observers.

Checking the models and towlines found all were OK – one of the Dutch models was just a hair's breadth under the area limit after rechecking calibrations of the measurement tools - and so the results were confirmed.

While the winning gliders were being checked the first round of F1B had started. The 3.30 max was easy for these models. Only 6 of the 73 competitors failed, Klaus Salzer by just 2 seconds, while Niv Levy of Israel recorded only 44 seconds following one wing tip having folded. Although not the subject of an official protest, it was discussed by the jury and decided that there were no grounds for an attempt since no part of the model had become detached. Another option was to disqualify the competitor for flying an under-area model but this was felt to be unduly harsh!

Round two also had gentle air which made the max easy, but after that the rougher air of the day brewed up. During round three the casualties included Gorban, Siltz, Morrell from the home team, and Ben Itzhak (1979 world champion at Taft).

Igor Silberg, who took third place in the 1969 Champs when flying for USSR, now flies for Germany and had an interesting long run model. This had maxed comfortably in the first three rounds but managed only 154 seconds in round four. The prop had folded at 130 sec at a very low height – giving less than half a minute glide – in the manner of low powered models in bad air. The long thin motor stretched the full length of the fuselage to the tailplane trailing edge and the time was mounted at the front of the fuselage to balance the weight of the rear fuselage and motor. A refreshing contrast to the conventional Ukrainian models and it would have been interesting to see it really compared in a flyoff.



Silberg's long-run model

Round 4, the last before lunch, was slightly less difficult than round 3, but after the break came the hardest round. This reduced the number of full scores from 52 to 42. By round 6 it was quite cloudy, but still warm and thermally and most of the entry went away in a few large bumps.

At the start of the final round Slovenia, Sweden, UK, and Yugoslavia teams had full scores. The British flyers had moved from one end of the line to the other for this round and were rather exposed on the end which was slightly upwind. Mike Woodhouse had a motor break and after a while John Billam was ready to fly. A number of models were launched at that end of the line but by the time John flew the lift had gone and he dropped. Just a few poles along Walt Ghio had also missed the lift and spoilt his full score. Chrebtov (Russia) was the only other person to suffer this fate and so 38 flyers went forward to the flyoff, including the remaining Brits - Woodhouse and Peers.

At the 5pm time of the first flyoff there was a steady breeze and it looked as though 5 minutes would be nearing the limits of visibility with haze in front of the mountains. There was no rush to fly quickly: Mike Woodhouse broke a motor, then had a strand break, and had wound his third model before anyone had flown. When they did go there was little doubt about it and 24 of the 38 maxed. This included all three of the Yugoslav team, who started a premature celebration of a team victory – but for teams tied on the seven round total the team places are decided by the minimum sum of the final places of the individual team members and this could not yet be determined. Russell Peers had missed by a few seconds but Mike Woodhouse survived to the next round.

The air had cooled and the drift reduced by the 6.15pm start time for the second round. This seven minute round was to be more difficult. While quite a few flyers cleared six minutes only seven reached the max. Kolic and Eimar were amongst this elite, but the team prize was now determined to go to Sweden – the two other Yugoslav flyers were so low down the list that, whatever the final places in the top seven, Sweden had a margin of at least one place better than Yugoslavia.. The others in the flyoff were Blake Jensen for the host country, Horak for Canada, Richard Blackam from Australia (fellow Aussie Terry Bond having dropped only 17 seconds in the second flyoff) and the two Ukrainians Stefanchuk (on the national team) and Kulakovsky defending his championship title.

The final showdown began at 7.10am in the usual Lost Hills quiet morning air. One and a half minutes after the start Kolic was first to be ready to launch and a few seconds later he did so. A couple of minutes later Eimar and Horak flew while the others did not hurry to launch. Blackam, Kulakovsky and Jensen flew late in the round and Stefanchuk, having had motor problems, was left on the line when the end of the round was sounded. The last people to launch looked to have the best air with Kulakovsky's high aspect ratio model no. 32 apparently holding up best on the glide. The models were watched down by the timekeepers but the spectators couldn't really tell except that the defending champion had been

most impressive. The times confirmed this with Oleg retaining his title by a margin of over 100 seconds above the closely placed second and third. Local pride was upheld by Blake Jensen's silver medal and Australia were pretty pleased with Richard's third, particularly when backed up by Terry Bond also in the top ten.

By the time the winning F1B models were processed and the top three places confirmed, Friday's business of F1C flying was well underway. The total entry of 45 seemed low but was actually slightly more than in Israel and there was only one fewer full three-man team. Distant desert venues tend to emphasise the reducing numbers of FAI power flyers.

Only 33 made the first round four-minute max, but the air stayed fairly still for round 2, when 40 managed the basic three minute max.

As the day warmed up and the thermals grew active the number maxing reverted to about 33 per round, but rounds 3 and 4 were particularly unkind to those with full scores, so that by lunch time only 19 were left with clear maxes. At the British pole experience counted for nothing when Stafford Screen dropped a few seconds in round 3 followed by a dramatic amount in round 4 and then Peter Watson dropped in round 4. Round 5 saw the end of the remaining British hopes when Cuthbert's model stayed in bunt mode as a result of an unfortunate mistake in rigging the lines.

Even worse happened to Babenskas of Lithuania, who was disqualified when the random processing found his model to be a few grams under the required weight for its area.

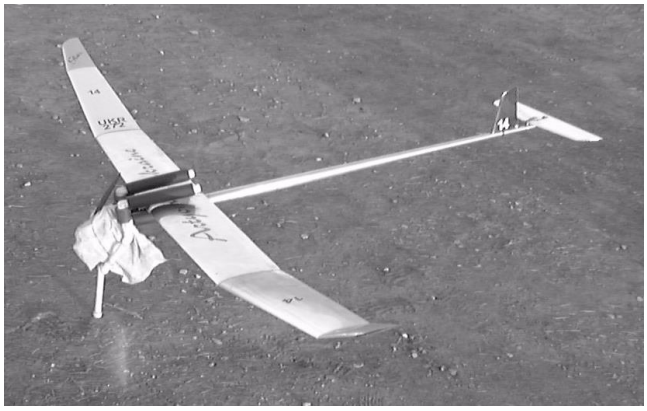
Until round 6 Poland and Ukraine had shared the glory in team performance by maintaining perfect scores. However, Plachetka's model was subject to a spot check and also found to be under-weight. Again the model was OK on the power loading but at 750g was under the 756g required to give the minimum area loading for the area. The team manager requested repeated measurements and multiple checks of the weight but it eventually became apparent that any small inaccuracies in the equipment could not explaine the difference.

Ukraine was thus left as clear leader in the team event and the victory was confirmed when all three flyers maxed in the final round.

Individually, only one-third of the entry had maxed and made their way to the first flyoff at 5pm. US flyer Ed Keck was first to launch followed by a group including Verbitsky. Eugeny's "VE70-gear" model was, as the name suggested sporting his famous geared motor in a classy black and silver model but this was not to be his day. The launch was beyond the vertical and slightly left, putting the transition into an awkward angle from which it lost much height. When it settled two or three other models were seen to have ended up at a similarly low height from which a max was most unlikely. Archer and Fuzeyev waited later and flew impressive climbs in their very different styles – Fuzeyev with his three-panel folding wing model which always drew applause on its transition and wing-spreading.

Only six had made the five minute max and gathered for the next round at 6.10pm. Babenko was first to fly, closely followed by fellow Ukrainian Alexandrov – the latter reaching much less height after a poor bunt. Truppe flew next, then Archer flying an unimpressive climb with the motor hesitating half-way up but clocking an over-run. Fuzeyev was next up, with a good example of his climb, followed by Randy Archer's second attempt. This time the run was very conservative – only just over 4 seconds – with consequent height deficit. The other US flyer Ed Keck was last to go and by contrast had a full run.

Some of the flights had looked good but, when the times were collected, we found that none of the six had made the maximum. The championship was thus decided without having to wait for another early morning conclusion. Babenko took gold with his Verbitsky-style geared model, Fuzeyev had the silver medal with his folder, and Truppe collected bronze with his conventional model. Disappointingly for the hosts, the USA flyers filled the last two places in the flyoff.



One of Babenko's geared F1C on his starting line storage stooge – padded supports over and below wing, pivoted to keep model into wind, plus the standard high-tech rag to keep the Lost Hills dust out of the engine

Discussions about geared F1Cs had judged the Canada Cup as being a "two class" F1C competition for geared models and ungeared models significantly below them. This was a repeat of the reaction to the Maxmen result at the start of this year. However, now the Champs had been topped by three very different models, so maybe the superiority is still not proven.… The common feature of the models was a span in the vicinity of 2.6m.

The banquet was at Stockdale Country Club in Bakersfield, an hour away by the coaches provided for the participants from Lost Hills and Buttonwillow. Some national anthems were not played fully - or at all in the case of Sweden, with the F1B team eventually rendering an impressive vocal version. Some of the trophies were not available for presentation (particularly those which had been held by the absent Bosnian team) and, for some indeterminate reason, only local medals were available rather than the real FAI medals and diploma.

Thus ended a champs which gave another opportunity to meet friends – competing, timing and otherwise helping. It will be remembered for superb field organisation and weather. Hungary will have a hard job to follow this in 2003.

F1A

1	Per Findahl	SWE	1290	+300	+420	+298
2	Maarten van Dijk	NED	1290	+300	+420	+293
3	Ivo Kreetz	NED	1290	+300	+413	
4	Vladyslav Lazarevych	UKR	1290	+300	+398	
5	Jury Titov	RUS	1290	+300	+376	
6	Dusan Fric	CZE	1290	+300	+373	
7	Shigeki Miyamoto	JPN	1290	+300	+367	
8	Dariusz Stezalski	W/C	1290	+300	+344	
9	Gerd Aringer	AUT	1290	+300	+334	
10	Diego Bovari	ARG	1290	+300	+329	
11	Victor Stamov	UKR	1290	+300	+323	
12	Henning Nyhegn	DEN	1290	+300	+321	
13	Dmytro Grygoriev	UKR	1290	+300	+318	
14	Sergei Makarov	RUS	1290	+300	+311	
15	Dirk Halbmeier	GER	1290	+300	+308	
16	Ivan Bezak	SVK	1290	+300	+303	
17	Mikhail Kochkarev	RUS	1290	+300	+301	
18	Mariusz Urban	POL	1290	+300	+279	
19	Vegar Nereng	NOR	1290	+300	+277	
20	Eyal Galor	ISR	1290	+300	+272	
21	Mikhel Holmbom	SWE	1290	+300	+270	
22	Czeslaw Ziober	POL	1290	+300	+265	
23	Abraham Baruch	ISR	1290	+300	+264	
24	Todor Boiadjiev	CAN	1290	+300	+263	
25	Jari Valo	FIN	1290	+300	+254	
26	Bostjan Bagari	SLO	1290	+300	+249	
27	Massimiliano Gobbo	ITA	1290	+300	+247	
28	Andrew Barron	USA	1290	+300	+244	
29	Bohuslav Ryz	CZE	1290	+300	+243	
30	Lubos Slavicek	CZE	1290	+300	+233	
30	Steve Spence	USA	1290	+300	+233	
32	Phil Mitchel	AUS	1290	+300	+231	
33	Chris Edge	GBR	1290	+300	+223	
34	Claudio Bognolo	ITA	1290	+300	+222	
35	Cenny Breeman	BEL	1290	+300	+217	
36	Walter Palmieri	ARG	1290	+300	+215	
37	Milan Valastiak	SVK	1290	+300	+195	
38	Voros Jero	HUN	1290	+300	+176	
39	Roman Ceresnik	SVK	1290	+300	+106	
40	Rudolf Holzleitner	AUT	1290	+295		
41	Emmanuel Ragot	FRA	1290	+193		
42	Siegried Limberger	LUX	209	180	180	180	180	180	180	1289
43	Peter Allnutt	CAN	205	180	180	180	180	180	180	1285
44	Avi Romi	ISR	210	180	180	180	180	169	180	1279
45	Renee Antonucci	ARG	196	180	180	180	180	180	180	1276
46	Anders Persson	SWE	182	180	180	180	180	180	180	1262
47	Gordon Mackenzie	CAN	170	180	180	180	180	180	180	1250
48	Hideyuki Dohi	JPN	210	180	137	180	180	180	180	1247
49	Danijel Terlep	SLO	210	180	180	180	180	136	180	1246
50	Anthony Ball	GBR	210	180	180	132	180	180	180	1242
51	Thomas Weimer	GER	210	130	180	180	180	180	180	1240
52	Rob Wallace	NZL	210	180	180	126	180	180	180	1236
53	Kari Tuisku	FIN	210	180	180	180	180	125	180	1235
54	Stanislaw Kubit	POL	210	123	180	180	180	180	180	1233
54	Daniel Trumpf	SUI	197	180	180	136	180	180	180	1233
56	Dietrich Sauter	GER	210	180	180	180	119	180	180	1229
57	Lee Hines	USA	210	180	118	180	180	180	180	1228
58	Javier Abad	ESP	210	180	180	180	180	116	180	1226
59	Ingolf Steffensen	NOR	210	180	180	153	180	140	180	1223
60	John Harte	NZL	210	154	180	180	135	180	180	1219
61	Damjan Zulic	SLO	210	180	180	89	180	180	180	1199
62	Heikki Salminen	FIN	210	175	180	180	180	90	180	1195
63	Vera Lacy	AUS	195	170	164	180	172	180	131	1192
64	Notaros Attila	HUN	146	143	180	180	179	180	180	1188

Findahl (above), van Dijk (below) prepare for final flyoff

65	Bertrand Pouzet	FRA	210	180	180	180	180	71	180	1181
66	Frederic Aberlenc	FRA	210	180	180	89	180	180	159	1178
67	Mitsunobu Wada	JPN	210	180	180	180	64	180	180	1174
67	John Williams	GBR	210	180	180	180	180	172	72	1174
69	Christoph Bachmann	SUI	210	178	180	180	180	180	58	1166
70	Antoon van Eldik	NED	84	180	180	180	180	180	180	1164
71	Rene Limberger	LUX	210	180	180	180	142	180	84	1156
72	Kerner Ferenc	HUN	210	180	180	180	72	130	180	1132
73	Werner Burri	SUI	46	180	180	155	180	180	180	1101
74	Stefano Pagnini	ITA	191	15	180	132	180	180	180	1058
75	Anders Klemetsen	NOR	149	82	180	180	180	180	74	1025
76	Carlos Ferreira	ESP	206	147	180	72	180	180	37	1002
77	Manfred Gruneis	AUT	210	119	102	180	180	180	0	971
78	Miguel Angel Gordillo	ESP	20	100	180	70	60	180	180	790
79	Ants Selgoja	EST	190	156	116	0	0	0	0	462
Number of maximums			64	66	74	68	70	69	70	
Number of full scores			64	58	56	51	47	41	41	

F1C

1	Artum Babenko	UKR	1320	+300	+378
2	Leonid Fuzevev	RUS	1320	+300	+371
3	Reinhard Truppe	AUT	1320	+300	+370
4	Vyacheslav Alexandrov	UKR	1320	+300	+343
5	Ed Keck	USA	1320	+300	+295
6	Randy Archer	USA	1320	+300	+257
7	Roman Czerwinski	POL	1320	+259	
8	Gauthier Briere	FRA	1320	+255	
9	Rolf Staebler	GER	1320	+251	
10	Chosei Tono	JPN	1320	+239	
11	Marek Roman	POL	1320	+195	
12	Claus-Peter Waechtler	GER	1320	+194	
13	Eugene Verbitsky	UKR	1320	+165	
14	Frank Schlachta	CAN	1320	+124	
15	Peter Maurer	SUI	1320	+35	

Top and bottom of F1C flyoff 2
Babenko(left) and Archer (right)

16	Daniel Iele	ARG	237	180	180	180	180	180	174	1311
17	Eric Condon	CAN	240	163	180	180	180	180	180	1303
18	Revaz Targamadze	RUS	219	180	180	180	180	180	180	1299
19	Kiburtas	LTU	240	180	157	180	180	174	180	1291
20	Alexander Mikhalenko	RUS	205	180	180	180	180	172	180	1277
21	Ken Oliver	USA	240	180	162	154	180	180	180	1276
22	Kazumasa Sekizawa	JPN	240	180	177	180	180	135	180	1272
23	Shigeru Kanegawa	JPN	240	180	180	180	180	130	180	1270
24	Uir Zilberstein	ISR	240	180	180	177	180	131	180	1268
24	Peter Watson	GBR	240	180	180	164	146	178	180	1268
26	Giorgio Venuti	ITA	240	180	180	180	180	117	180	1257
27	Roberto Guadagno	ITA	240	154	180	180	180	142	180	1256
28	Kaarle Kuukka	FIN	240	180	173	180	117	180	180	1250
29	Mauricio Zito	ARG	205	180	180	161	180	151	180	1237
30	David Thomas	AUS	219	180	180	180	180	180	115	1234
31	Maczko Oszkor	HUN	240	180	180	150	145	146	180	1221
32	Juri Roots	EST	198	180	152	180	142	180	180	1212
33	Stafford Screen	GBR	240	180	162	93	180	180	171	1206
34	Jon Fletcher	AUS	240	180	123	180	142	180	145	1190
34	Alain Roux	FRA	236	180	180	146	180	180	88	1190
36	Roy Summersby	AUS	240	180	180	180	180	180	40	1180
37	John Cuthbert	GBR	240	180	180	180	32	180	180	1172
38	Raimond Naaber	EST	183	180	180	180	111	149	180	1163
39	Uwe Glissmann	GER	240	0	180	180	170	180	180	1130
40	Henning Nyhegn	DEN	240	180	145	96	148	106	180	1095
41	Gerd Aringer	AUT	34	180	180	180	180	147	180	1081
42	Bruno Fiegl	ITA	51	139	152	180	180	180	180	1062
43	Bernard Boutillier	FRA	207	119	70	129	118	92	113	848
44	Gabor Zsengeller	HUN	240	180	180	109	19	0	0	728
45	Eduardo Furferi	ARG	231	180	12	0	0	0	0	423
Number of maximums			33	40	34	34	33	29	36	
Number of full scores			33	30	23	19	18	16	15	

F1B

1	Oleg Kulakovskiy	W/C	1290	+300	+420	+525
2	Blake Jensen	USA	1290	+300	+420	+420
3	Richard Blackam	AUS	1290	+300	+420	+416
4	Ivan Kolic	YUG	1290	+300	+420	+329
5	Bror Eimar	SWE	1290	+300	+420	+308
6	Ladislav Horak	CAN	1290	+300	+420	+224
7	Stepan Stefanchuk	UKR	1290	+300	+420	
8	Terry Bond	AUS	1290	+300	+403	
9	Ole Torgersen	NOR	1290	+300	+397	
10	Hakan Broberg	SWE	1290	+300	+392	
11	Marjan Klenovsek	SLO	1290	+300	+390	
12	Jannie Isotalo	FIN	1290	+300	+385	
13	Andrei Burdov	RUS	1290	+300	+379	
14	Vladislav Urban	CZE	1290	+300	+377	
14	Yoshinori Umehara	JPN	1290	+300	+377	
16	Serge Tedeschi	FRA	1290	+300	+358	
17	Milan Novy	CZE	1290	+300	+355	
18	Mike Woodhouse	GBR	1290	+300	+348	
19	Eugeniusz Cofalik	POL	1290	+300	+346	
20	Didier Barberis	FRA	1290	+300	+330	
21	Svetozar Gostojic	YUG	1290	+300	+324	
22	Branko Bigelic	YUG	1290	+300	+316	
23	Walter Eggimann	SUI	1290	+300	+283	
24	Jim Brooks	CAN	1290	+300	+145	
25	Abraham Baruch	ISR	1290	+300		
26	Anders Broberg	SWE	1290	+283		
27	Russell Peers	GBR	1290	+263		
28	David Ackery	NZL	1290	+262		
29	Stanislaw Skibicki	POL	1290	+260		
30	Inguss Rosonoks	LAT	1290	+236		
31	Yrjo Waltonen	FIN	1290	+228		
32	Tomaz Hribar	SLO	1290	+225		
33	Sandis Rosonoks	LAT	1290	+220		
34	John Malkin	NZL	1290	+187		
35	Remo Bovio	ARG	1290	+182		
36	Pim Ruyter	NED	1290	+171		
37	Horst Wagner	AUT	1290	+127		
38	Damjan Zulic	SLO	1290	+38		

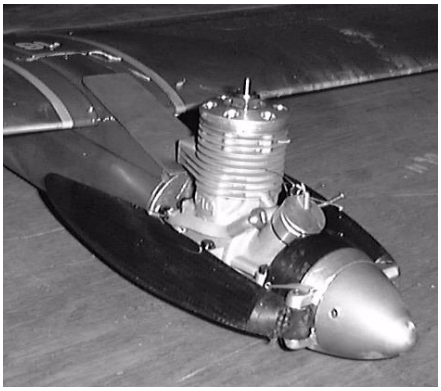
39	Horacio Ortiz	ARG	210	178	180	180	180	180	180	1288
40	Nicolai Mikheev	RUS	210	180	175	180	180	180	180	1285
41	Piero Pecchioli	ITA	210	180	180	174	180	180	180	1284
42	Jan Wold	NOR	210	180	173	180	180	180	180	1283
43	Francois Rapin	FRA	210	180	180	180	180	172	180	1282
44	Don Blackam	AUS	210	180	180	180	168	180	180	1278
45	Evgeny Gorban	UKR	210	180	167	180	180	180	180	1277
46	Cameron Ackerley	CAN	210	180	180	180	163	180	180	1273
47	Alan Mcdonald	NZL	210	180	180	162	180	180	180	1272
48	Rudesindo Marquez	ARG	210	180	161	180	180	180	180	1271
49	Viktors Rosonoks	LAT	210	180	180	180	158	180	180	1268
50	Radovan Kolar	CZE	187	180	180	180	180	180	180	1267
51	Michel Gordillo	ESP	186	180	180	180	180	180	180	1266
52	Igor Zilberg	GER	210	180	180	154	180	180	180	1264
53	Peter Moenninghoff	GER	210	180	180	180	151	180	180	1261
53	Itzhak Itzik Ben	ISR	210	180	151	180	180	180	180	1261
55	Henk van Hoorn	NED	210	180	180	180	145	180	180	1255
55	Josef Kosciarz	POL	210	180	180	180	145	180	180	1255
57	Walt Ghio	USA	210	180	180	180	180	180	130	1240
58	Antonio Sanavio	ITA	210	180	180	180	129	180	180	1239
58	Yuriy Blazhevych	UKR	210	180	180	180	129	180	180	1239
60	Bernd Silz	GER	210	180	125	180	180	180	180	1235
61	Juhani Isotalo	FIN	210	180	180	180	121	180	180	1231
62	Mitsuyasu Nakata	JPN	210	180	161	180	137	180	180	1228
63	Mario Lovato	ITA	210	180	180	180	117	180	180	1227
64	Klaus Salzer	AUT	208	180	180	180	180	180	116	1224
65	John Billam	GBR	210	180	180	180	180	180	108	1218
66	Andre Chrebtov	RUS	210	180	180	180	180	180	104	1214
67	Rudolf Trumpf	SUI	210	167	180	75	179	180	164	1155
68	Ramon Durendez	ESP	210	180	169	180	180	22	180	1121
69	Roger Morrell	USA	210	180	153	180	21	180	180	1104
70	Harald Meusburger	AUT	210	180	169	180	180	81	70	1070
71	Niv Levy	ISR	44	180	180	180	114	180	180	1058
72	Masami Orima	JPN	4	180	180	180	125	180	180	1029
73	Jan Klinkien	NED	123	180	180	180	77	85	180	1005
Number of maximums			67	71	63	69	57	69	67	
Number of full scores			67	65	55	52	42	41	38	

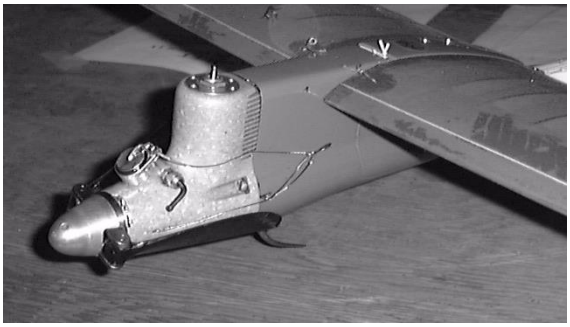
F1A TEAM RESULTS

	Country	Abbrev	Total	Round-by-round team place							Team member places		
1	Ukraine	UKR	3870	1	1	1	1	1	1	1	4	11	13
2	Russia	RUS	3870	1	1	1	1	1	1	1	5	14	17
3	Czech Republic	CZE	3870	1	1	1	1	1	1	1	6	29	30
4	Slovakia	SVK	3870	1	1	1	1	1	1	1	16	37	39
5	Israel	ISR	3859	1	1	1	1	1	5	5	20	23	44
6	Argentina	ARG	3856	15	12	10	7	7	6	6	10	36	45
7	Sweden	SWE	3842	17	13	11	8	8	7	7	1	21	46
8	Canada	CAN	3825	18	14	13	10	9	8	8	24	43	47
9	Poland	POL	3813	1	16	15	13	11	10	9	18	22	54
10	USA	USA	3808	1	1	16	14	12	11	10	28	30	57
11	Germany	GER	3759	1	15	14	12	15	12	11	15	51	56
12	Netherlands	NED	3744	21	19	18	18	16	13	12	2	3	70
13	Slovenia	SLO	3735	1	1	1	15	13	14	13	26	49	61
14	Finland	FIN	3720	1	11	9	6	6	16	14	25	53	62
15	Japan	JPN	3711	1	1	12	9	18	17	15	7	48	67
16	Great Britain	GBR	3706	1	1	1	11	10	9	16	33	50	67
17	France	FRA	3649	1	1	1	15	13	18	17	41	65	66
18	Italy	ITA	3638	16	22	22	21	21	20	18	27	34	74
19	Hungary	HUN	3610	20	18	17	17	20	22	19	38	64	72
20	Austria	AUT	3551	1	17	19	19	17	15	20	9	40	77
21	Norway	NOR	3538	19	20	20	20	19	19	21	19	59	75
22	Switzerland	SUI	3500	22	21	21	22	22	21	22	54	69	73
23	Spain	ESP	3018	23	23	23	23	23	23	23	58	76	78
24	Australia	AUS	2482	26	25	26	25	25	25	24	32	63	
25	New Zealand	NZL	2455	24	26	25	26	26	26	25	52	60	
26	Luxembourg	LUX	2445	25	24	24	24	24	24	26	42	71	
27	Belgium	BEL	1290	27	27	27	27	27	27	27	35		
28	Denmark	DEN	1290	27	27	27	27	27	27	27	12		
29	Estonia	EST	462	29	29	29	29	29	29	29	79		

F1C TEAM RESULTS

	Country	Abbrev	Total	Round-by-round team place							Team member places		
1	Ukraine	UKR	3960	1	1	1	1	1	1	1	1	4	13
2	USA	USA	3916	1	1	3	3	3	2	2	5	6	21
3	Russia	RUS	3896	9	7	5	4	4	3	3	2	18	20
4	Japan	JPN	3862	1	1	2	2	2	4	4	10	22	23
5	Germany	GER	3770	1	9	7	7	6	6	5	9	12	39
6	Great Britain	GBR	3646	1	1	3	6	8	7	6	24	33	37
7	Australia	AUS	3604	6	5	6	5	5	5	7	30	34	36
8	Italy	ITA	3575	10	10	10	8	7	8	8	26	27	42
9	France	FRA	3358	7	8	8	9	9	9	9	8	34	43
10	Argentina	ARG	2971	8	6	9	10	10	10	10	16	29	45
11	Poland	POL	2640	11	11	11	11	11	11	11	7	11	
12	Canada	CAN	2623	11	13	13	12	12	12	12	14	17	
13	Austria	AUT	2401	15	15	15	15	13	13	13	3	41	
14	Estonia	EST	2375	14	14	14	14	14	14	14	32	38	
15	Hungary	HUN	1949	11	11	11	13	15	15	15	31	44	
16	Switzerland	SUI	1320	16	16	16	16	16	16	16	15		
17	Lithuania	LTU	1291	16	16	19	19	18	17	17	19		
18	Israel	ISR	1268	16	16	16	17	17	18	18	24		
19	Finland	FIN	1250	16	16	18	18	19	19	19	28		
20	Denmark	DEN	1095	16	16	20	20	20	20	20	40		





F1C motive power – Babenko's gears left, Fuzyev right

F1B TEAM RESULTS

	Country	Abbrev	Total	Round-by-round team place							Team member places		
1	Sweden	SWE	3870	1	1	1	1	1	1	1	5	10	26
2	Yugoslavia	YUG	3870	1	1	1	1	1	1	1	4	21	22
3	Slovenia	SLO	3870	1	1	1	1	1	1	1	11	32	38
4	France	FRA	3862	1	1	1	1	1	6	4	16	20	43
5	Australia	AUS	3858	1	1	1	1	7	7	5	3	8	44
6	Canada	CAN	3853	1	1	1	1	9	8	6	6	24	46
7	New Zealand	NZL	3852	1	1	1	15	10	9	7	28	34	47
8	Argentina	ARG	3849	1	17	16	16	11	10	8	35	39	48
9	Latvia	LAT	3848	1	1	1	1	12	11	9	30	33	49
10	Czech Republic	CZE	3847	19	19	17	17	13	12	10	14	17	50
11	Poland	POL	3835	1	1	1	1	14	13	11	19	29	55
12	Finland	FIN	3811	1	1	1	1	15	14	12	12	31	61
13	Ukraine	UKR	3806	1	1	14	13	16	15	13	7	45	58
14	Great Britain	GBR	3798	1	1	1	1	1	1	14	18	27	65
15	Russia	RUS	3789	1	1	13	11	6	5	15	13	40	66
16	Germany	GER	3760	1	1	19	19	17	16	16	52	53	60
17	Italy	ITA	3750	1	1	1	12	18	18	17	41	58	63
18	USA	USA	3634	1	1	18	18	19	19	18	2	57	69
19	Israel	ISR	3609	21	21	21	21	21	20	19	25	53	71
20	Austria	AUT	3584	18	17	14	13	8	17	20	37	64	70
21	Netherlands	NED	3550	20	20	20	20	20	21	21	36	55	73
22	Japan	JPN	3547	22	22	22	22	22	22	22	14	62	72
23	Norway	NOR	2573	23	23	23	23	23	23	23	9	42	
24	Switzerland	SUI	2445	23	24	24	25	25	24	24	23	67	
25	Spain	ESP	2387	25	25	25	24	24	25	25	51	68	

CANADA CUP, Lost Hills, USA October 6-7

F1A 104 flew

1	B Ryz	CZE	1290	+300	+420	+448
2	J Cooper	GBR	1290	+300	+420	+408
3	B Coussens	USA	1290	+300	+420	+331
4	P Findahl	SWE	1290	+300	+420	+312
5	J Williams	GBR	1290	+300	+420	+264
6	E Galor	ISR	1290	+300	+420	+261
7	E Ragot	FRA	1290	+300	+420	+255
8	L Hines	USA	1290	+300	+420	+245
9	J Valo	FIN	1290	+300	+420	+216
10	P Allnutt	CAN	1290	+300	+420	+159
11	I Yablonovsky	UKR	1290	+300	+404	
12	T Coussens	USA	1290	+300	+336	
13	D Fric	CZE	1290	+300	+290	
13	B Bostjan (J)	SLO	1290	+300	+290	
15	J Voros	HUN	1290	+300	+205	
16	R Holzleitner	AUT	1290	+300	+181	
17	M Cowley	USA	1290	+300	+172	
18	G Aringer	AUT	1290	+300	+127	
19	I Zavgorodny	UKR	1290	+300	+117	
20	D Kozlyuk	USA	1290	+90		
21	A Nuttgens	GER	1288			
22	F Aberlenc	FRA	1285			
23	H Salminen	FIN	1283			

F1B 94 flew, 44 full scores

1	A Andriukov	USA	1290	+300	+420	+414
2	I Zilberg	GER	1290	+300	+420	+397
3	Y Kitrebto	RUS	1290	+300	+420	+392
4	Sheledon	RUS	1290	+300	+420	+389
5	O Krysko	UKR	1290	+300	+420	+386
6	R Piserchio	USA	1290	+300	+420	+374
7	Burdov	UKR	1290	+300	+420	+365
8	B Jensen	USA	1290	+300	+420	+358
9	T Bond	AUS	1290	+300	+420	+345
10	J Kosciarz	POL	1290	+300	+420	+341
11	P Monninghoff	GER	1290	+300	+420	+337
12	A Bukin	UKR	1290	+300	+420	+325
13	G Schroedter	USA	1290	+300	+420	+324
14	E Gorban	UKR	1290	+300	+420	+320
15	D Blackam	AUS	1290	+300	+420	+314
16	J Billam	GBR	1290	+300	+420	+312
16	B Bijelic	YUG	1290	+300	+420	+312
18	M Klenovsek	SLO	1290	+300	+420	+311
19	D Barberis	FRA	1290	+300	+420	+305
20	R Peers	GBR	1290	+300	+420	+282
21	W Ghio	USA	1290	+300	+420	+281
22	V Rosonoks	LAT	1290	+300	+420	+280
23	B Aslett	GBR	1290	+300	+420	+262
24	H van Hoorn	NED	1290	+300	+420	+242

F1C 46 flew 30 full scores

1	R Archer	USA	1320	+300	+420	+540	+555
2	E Verbitsky	UKR	1320	+300	+420	+540	+346
3	D Johannes	USA	1320	+300	+420	+540	+301
4	T Kerger	USA	1320	+300	+420	+533	
5	T Chosei	JPN	1320	+300	+420	+530	
6	D Joyce	USA	1320	+300	+420	+523	
7	A Kirilenko	USA	1320	+300	+420	+488	
8	S Kazumasa	JPN	1320	+300	+420	+485	
9	R Simpson	USA	1320	+300	+420	+475	
10	B Gutai	USA	1320	+300	+420	+474	
11	J Cuthbert	GBR	1320	+300	+420	+453	
12	D Perkins	USA	1320	+300	+420	+443	
13	M Zito	ARG	1320	+300	+420	+442	
13	P Plachetka	POL	1320	+300	+420	+442	
15	V Alexandrov	UKR	1320	+300	+420	+431	
16	L Ruzeyen	RUS	1320	+300	+420	+413	
17	E Keck	USA	1320	+300	+420	+410	
18	F Parker	USA	1320	+300	+420	+390	
19	A Mikhajlenko	RUS	1320	+300	+420	+378	
20	G Aringer	AUT	1320	+300	+420	+370	
21	G Menano	USA	1320	+300	+420	+338	
22	A Babenko	UKR	1320	+300	+420	+326	

F1E WORLD CHAMPIONSHIPS, NOWY TARG, POLAND, SEPTEMBER 21-26

Senior

1	Andreas Tschanz	SUI	180	207	240	300	260	1187	481.84
2	Herbert Schmidt	GER	180	240	240	300	219	1179	480.51
3	Fritz Mang	AUT	180	240	240	300	203	1163	474.63
4	Jon Davis	USA	180	240	240	300	196	1156	472.06
5	Bohumir Berger	CZE	180	240	240	208	272	1140	469.33
6	Daniel Petcu	ROM	180	240	240	285	194	1139	466.32
7	Karl-Heinz Ritterbusch	GER	180	240	240	252	221	1133	465.25
8	Bernhard Schuessler	GER	180	240	240	285	178	1123	460.44
9	Peter Nosko	SVK	180	240	240	250	200	1110	456.86
10	Milan Valastiak	SVK	180	216	240	250	224	1110	455.68
11	Florian Draghici	ROM	177	240	235	277	180	1109	454.76
12	Ivan Treger	SVK	165	240	240	264	201	1110	453.57
13	Laszlo Kovacs	HUN	180	240	240	269	166	1095	450.70
14	Vojtech Zima	CZE	156	240	235	245	220	1096	447.14
15	Reinhard Wolf	AUT	180	240	211	217	225	1073	442.97
16	Kiss Balazs Sarusi	HUN	180	202	240	300	145	1067	437.48
17	Wladimir Perszin	RUS	160	210	240	260	181	1051	429.60
18	Maurice Bodmer	SUI	180	184	219	270	190	1043	427.77
19	Heinz Bleur	SUI	180	195	240	222	184	1021	422.90
20	George Arghir	ROM	180	240	240	210	130	1000	417.79
21	Juraj Uhrin	W/C	180	183	172	300	179	1014	413.73
22	Alfred Dotzl	AUT	180	208	186	238	174	986	407.47
23	Boguslaw Kudas	POL	180	240	240	114	184	958	405.65
24	Franciszek Kanczok	POL	175	240	240	43	244	942	401.26
25	Ivan Crha	CZE	180	183	240	168	187	958	401.00
26	Andras Varga	HUN	171	234	240	113	180	938	396.35
27	Stanislaw Bochenski	POL	146	240	240	236	34	896	372.28
28	Aleksandr Kulman	RUS	30	34	25	0	0	89	41.26
Number of maximums			20	17	21	6	1		
Number of full scores			20	12	11	3	0		
Maximum which was set			180	240	240	300	300		
Longest flight time achieved			180	240	240	300	272		

Junior

1	Kukasz Morgala	POL	177	240	240	266	286	1209	487.32
2	Michaela Noskova	SVK	180	235	217	266	197	1095	447.67
3	Sebastian Ionita	ROM	180	240	240	234	193	1087	446.72
4	Martin Horn	CZE	180	240	213	229	200	1062	436.05
5	Adrian Draghici	ROM	180	197	230	278	163	1048	430.13
6	Daniel Bildea	ROM	180	185	240	255	176	1036	425.54
7	Markus Fischer	GER	155	240	229	217	163	1004	412.27
8	Michael Bleur	SUI	153	221	200	215	210	999	406.11
9	Andre Schmieder	GER	180	194	221	245	128	968	401.85
10	Lubos Nemcek	SVK	179	218	203	189	172	961	398.73
11	Petr Hofman	CZE	170	182	181	264	159	956	391.65
12	Alexandru Popa	W/C	121	240	70	240	300	971	380.90
13	Kolja Loeblich	GER	73	240	240	204	195	952	377.39
14	Micheal Michalik	POL	180	213	236	120	114	863	367.33
15	Wojciech Teper	POL	176	240	173	52	176	817	346.84
16	Jan Brada	CZE	38	240	240	284	35	837	332.78
17	Tomas Hangodi	HUN	111	103	126	166	141	647	262.54
Number of maximums			7	8	5	1	1		
Number of full scores			7	2	1	0	0		
Maximum which was set			180	240	240	300	300		
Longest flight time achieved			180	240	240	284	300		

F1E Junior Team Results

	Country	Abbrev	Total	Team member places		
1	Romania	ROM	1302.39	3	5	6
2	Poland	POL	1201.49	1	14	15
3	Germany	GER	1191.51	7	9	13
4	Czech Republic	CZE	1160.48	4	11	16
5	Slovakia	SVK	846.40	2	10	
6	Switzerland	SUI	406.11	8		
7	Hungary	HUN	262.54	17		

F1E Senior Team Results

1	Germany	GER	1406.20	2	7	8
2	Slovakia	SVK	1366.11	9	10	12
3	Romania	ROM	1338.87	6	11	20
4	Switzerland	SUI	1332.51	1	18	19
5	Austria	AUT	1325.07	3	15	22
6	Czech Republic	CZE	1317.47	5	14	25
7	Hungary	HUN	1284.53	13	16	26
8	Poland	POL	1179.19	23	24	27
9	USA	USA	472.06	4		
10	Russia	RUS	470.86	17	28	

FINAL RESULTS WORLD CUP 2001 F1E

1	Daniel Petcu	ROM	137	RA-1	MK-1	FR-3	LP-4	NA-8	RZ-10	TC-12	RB-6	SF-13 KA-10
2	Vojtech Zima	CZE	132	TC-1	SF-1	RB-4	KA-5	LP-8	MK-12	NA-7	RA-18	
3	Sebastian Ionita (J)	ROM	108	NA-1	RZ-2	LP-12	SF-4	TC-6				
4	Viktor Gerhard	GER	102	RZ-1	OB-3	FR-8	RA-10					
5	Fritz Mang	AUT	95	FR-1	LP-5	RZ-6	OB-6	RA-14	RB-21	KA-13		
6	Marian Popescu	ROM	95	LP-2	SF-3	MK-6	RA-9	OB-9				
7	Frantisek Doupovec	CZE	95	RA-2	KA-3	LP-7	OB-8	RZ-11	RB-10			
8	Peter Nosko	SVK	93	TC-2	MK-4	RB-5	LP-9	NA-10	RA-13			
9	Milan Valastiak	SVK	87	RA-3	MK-3	LP-6	RB-20					
10	Stanislaw Kubit	POL	85	SF-2	RA-5	NA-6	RB-15	RZ-12				
11	Reinhard Wolf	AUT	83	KA-2	OB-2	FR-5						
12	Ivan Treger	SVK	76	MK-2	RB-3	RA-17						
13	Michaela Noskova (J)	SVK	75	LP-1	FR-10	RA-19						
14	Edith Mang	AUT	71	RZ-4	OB-4	KA-8	MK-10	RB-19				
15	Jaromir Orel	CZE	70	RZ-3	RA-8	LP-10	MK-11					
16	Julius Valastiak	SVK	70	LP-3	KA-4	MK-15	FR-4					
17	Florian Draghici	ROM	69	TC-3	RB-9	MK-9	NA-5	RA-12				
18	George Arghir	ROM	69	NA-2	MK-5	RZ-15						
19	Siegfried Puttner	GER	67	KA-1	OB-10	FR-11						
20	Jan Smeringai	SVK	55	KA-6	TC-8	RA-11	LP-11	FR-6				
21	Bohumir Berger	CZE	55	FR-2	RB-14	KA-7						
22	Frantisek Martan	CZE	54	RB-1								
23	Helmut Schuberth	GER	51	OB-1								
24	Andreea Ciucu (J)	ROM	49	NA-2	LP-13							
25	Jozef Morgala	POL	48	FR-7	SF-9	LP-15	RB-16	RZ-13				
26	Viktor Salistean (J)	ROM	45	NA-4	RZ-8							
27	Andrei Gheorghe	ROM	44	RB-2								
28	Alfred Dotzl	AUT	44	RZ-7	KA-12	MK-16						
29	Daniel Bildea (J)	ROM	41	RA-7	SF-7							
30	Iuliana Paltane	ROM	40	RA-6	FR-8							

Contests included in F1E World Cup

				No.flying
RA	Rana near Louny 1	CZE	27 Apr	38
RB	Rana near Louny 2	CZE	28 Apr	42
TC	Turda Cup	ROM	22 Jun	25
NA	Napoca Cup	ROM	23 Jun	19
FR	15th Freundschaftscup	AUT	14 Aug	22
KA	24th Kolibri-Pokal	AUT	18 Aug	26
MK	Mikulas Cup of Hungary	HUN	15 Sep	34
LP	Liptov Cup	SVK	20 Sep	30
SF	Saint Florian's	POL	25 Sep	30
RZ	Governors Cup	POL	29 Sep	33
OB	Oberkotzau	GER	13-14 Oct	19

SAINT FLORIAN F1E, Nowy Targ, Poland
September 25, 30 flew

1	V Zima	CZE	500.00	+281
2	S Kubit	POL	500.00	+216
3	M Popescu	ROM	500.00	+202
4	S Ionita (J)	ROM	500.00	+196
5	M Michalik (J)	POL	492.08	
6	W Teper (J)	POL	487.33	
7	D Bildea (J)	ROM	473.67	
8	S Bochenski	POL	469.17	
9	J Morgala	POL	466.33	
10	W Dziuba	POL	455.00	
11	K Morgala (J)	POL	451.08	

GOVERNORS CUP F1E , Lubomia, Poland September 29, 33 flew

1	V Gerhard	GER	485.42
2	S Ionita (J)	ROM	450.00
3	J Orel	CZE	431.67
4	E Mang	AUT	422.50
5	D Benisz (J)	POL	404.17
6	F Mang	AUT	380.83
7	A Dotzl	AUT	372.08
8	V Salistean (J)	ROM	370.84
8	F Kanczok	POL	370.83
10	D Petcu	ROM	362.08

OBERKOTZAU F1E, GERMANY October 13-14, 19 flew

1	H Schuberth	GER	500.00
2	R Wolf	AUT	497.36
3	V Gerhard	GER	494.44
4	E Mang	AUT	494.17
5	W Dziuba	POL	493.33
6	F Mang	AUT	488.47
7	J Blazek	CZE	486.25

OXFORD MFC/DREAMING SPIRES RALLY, PORTMEADOW, OXFORD, SEPTEMBER 23

Report by Andrew Crisp

The club rally has been rather a rare beast this year, what with one thing and another, but by combining the two Oxford run comps on one day, albeit later in the year than is customary, a reasonable day's flying was enjoyed by over 100 competitors.

Sandwiched between two absolutely calm, autumnal days, the Sunday experienced only one major rain shower and a modest breeze from the north-east, which gave a good run of the Meadow, but slight retrieval problems if models crossed, or as was sometimes the case, landed in the Thames. Fortunately, there was a sailing event in progress and the safety marshall kindly retrieved several water-borne models with the utmost care.

As to the flying - the results tell all; not much lift and quite a bit of turbulence, which caused many a promising start to decay. There were only three full houses in the various events, Bert Whitehead with his E30, Richard Fryer in nostalgia glider with a "Caprice", and Ian Davitt in vintage rubber with his "Senator". As well as the regular Rally prizes, Davitt went away with the Ian McDonald Trophy. This was presented by Mrs Sylvia McDonald in memory of her husband Ian, a regular supporter of this competition and rubber events in general, who sadly passed away at the end of last year.

The combining of P30 and E30 (to the new, heavyweight rules) seemed to work quite well. Peter Lang could have forced Whitehead to a flyoff, but after a long retrieve had only a short time to prepare before the cut-off bell. The resulting, rushed 1.40 flight ensured third place nevertheless Peter's fleet of models is noteworthy for being all Jedelsky winged. The last time I saw him buying wood from John Hook it was 4 lb/ft^3. We are talking light wings here!

Yet again Andrew Longhurst won the Gala Champ award flying in four events, although he could well have been pipped had Spencer Willis been able to slip in a few HLG flights!

Although outside of our remit there was a splendid scale event run by Charlie Newman. Hard-bitten "duration" men stood open-mouthed as a large F86 Sabre whined its way round the field under the influence of an electric ducted fan. **Even** J O'D is slipping into outdoor scale these days, flying a high wing monoplane with welcome pronounced dihedral and, of course, having the necessary documentation to prove it!

Coupe d'Hiver 21 entries

1	G Stringer	9.44
2	E Challis	9.30
3	I Davitt	9.21

A1 8 entries

1	A Gibbs	8.38
2	R Heap	7.33
3	J Carter	7.19

E30+P30 14 entries

1	A Whitehead	10.00
2	J O'Donnell	9.45
3	P Lang	9.40

Tailless 4 entries

1	A Longhurst	5.52
2	S Willis	5.47
3	J White	0.46

HLG 8 entries

1	M Benns	8.02
2	M Francis	6.29
3	N Bathe	5.45

Vintage HLG 3 entries

1	S Willis	4.47	Huguetot
2	L Lawley	3.51	Dingbat

Vintage Rubber 21 entries

1	I Davitt	6.00	Senator
2	G Ferer	5.58	Buckeridge
3	J O'Donnell	5.56	Eager Beaver

Vintage Glider 6 entries

1	G Beal	5.17	Devorian
2	T King	5.14	Revenge
3	R Woodruffe	4.43	Gilihatchet

Nostalgia Glider 7 entries

1	R Fryer	6.00	Caprice
2	T King	5.27	Caprice
3	S Darmon	4.00	Jezabel

Scale 12 entries

1	W Dennis	Brandenburg
2	C Strachan	Flitzer
3	S Glass	F86 Sabre

TYNEMOUTH MINI RALLY SEPTEMBER 30

The Rally wasn't so much marred by the weather, but the previous evening's forecast of 20-25 mph winds and rain for most of the day which put off prospective contestants. Actual conditions were no rain and 15-20 mph winds easing a little in the afternoon when the cloud broke to give some sun. Luckily the South wind was along the widest stretch of Newcastle Town Moor. A 1:15 max kept models on the grass field site but was of sufficient duration to make maxing difficult in the turbulence downwind of buildings and trees.

In the Power event Alan Brown stopped flying with three maxes after damaging two of his British Power models,leaving Alan Jack to fight it out with Colin Hickmott flying 1/2A models. Alan eventually won dropping one flight in turbulence to Colin`s two.

HLG was a close competition between Ron Pollard and Alan Jack, the result being decided by a poor sixth flight from Alan. Alan's son Richard came third showing signs of inheriting his Dad's lift picking ability.

Comb BMFA 1/2A & British Power 4 flew

1	A Jack	Tynemouth	5.48
2	C Hickmott	NYFFG	4.46
3	A Brown	Novocastria	3.45

HLG (7x1) 5 flew

1	R Pollard	Tynemouth	4.54
2	A Jack	Tynemouth	4.27
3	R Jack	Tynemouth	3.14

FAI WORLD CUP POSITIONS

Best 4 results shown, top three count towards World Cup score except when more results are required to decide in the event of a tie.

Contests included in the F1A F1B F1C results:

MM	Max Men USA	BC	Bear Cup FIN
HL	Holiday on Ice NOR	AC	AFFS Ch AUS
SN	Southern Cross AUS	UP	May Comp SWE
SV	Srem Cup YUG	VS	Vsechov CZE
EM	Concurso Nacional ARG	PZ	Puszta Cup HUN
NC	Novohrad SVK	SC	Scania Cup SWE
CM	Castilla la Mancha ESP	VH	Von Hafe Cup POR
VB	Verbitsky Cup UKR	SB	Sibiu Cup ROM
AN	Antonov Cup UKR	HC	Huron Cup CAN
RN	Russian Nationals RUS	PT	Poitou FRA
VJ	Voros Jeno HUN	SW	Summer Cup POL
CC	Canada Cup USA		

F1C

1	J Cuthbert	GBR	152	UP-1	SH-1	CM-1	VH-1	
2	E Verbitsky	UKR	148	PZ-1	CC-2	MM-2	AN-2	
3	P Watson	GBR	115	PT-1	SH-2	MM-8		
4	A Lindner	GER	115	HL-1	SC-1	PZ-12		
5	A Molchanov	UKR	114	EF-1	VB-2	PZ-9	BD-3	
6	Z Szablewszki	POL	102	VJ-1	SW-1			
7	D Thomas	AUS	100	AC-1	SN-1			
8	C P Wachtler	GER	98	BD-1	VS-3	PZ-12		
9	M Roman	POL	97	VS-1	PZ-5	BD-5		
10	V Alexandrov	UKR	93	PZ-2	VB-3	CC-15	AN-8	
11	A Babenko	UKR	89	VB-1	PZ-4	CC-22	AN-1	
12	S Screen	GBR	84	PT-2	SH-4	MM-13		
13	E Keck	USA	83	HC-1	MM-5	CC-17		

F1A

1	S Rumpp	GER	155	HL-1	VJ-1	SC-1	EF-4	
2	V Stamov	UKR	140	MM-1	VB-1	PZ-3	SH-4	
3	P Findahl	SWE	131	SW-1	SH-1	CC-4	HL-4	
4	J Valo	FIN	130	BC-1	PZ-2	HL-3	CC-9	
5	P de Boer	NED	119	PT-1	BD-1	HL-14		
6	M Holmbom	SWE	113	UP-1	HL-2	BC-6		
7	P Drapeau (J)	FRA	101	CM-1	EF-3	SB-8	PT-14	
8	V Crougenec	FRA	97	PT-2	SB-3	EF-6	CM-6	
9	G Aringer	AUT	97	PZ-1	PT-5	BD-11	HL-15	
10	F Kerner	HUN	96	EF-1	SV-4	VJ-8	NC-20	
11	A Notaros	HUN	93	SV-1	PZ-6	NC-8		
12	J Parker	USA	92	HC-1	MM-2			
13	I Bezak	SVK	90	VS-1	NC-4	PZ-20		
14	B van Nest	USA	88	VB-2	MM-4	HL-7	AN-9	
15	K Kulmakko	FIN	87	CM-3	VH-3	VJ-4	HL-11	
16	F Aberlenc	FRA	84	CM-2	NC-3	MM-14	CC-22	
17	I Yablonovsky	UKR	81	NC-2	AN-5	CC-11	EF-12	
18	O Stoev	UKR	81	SB-1	PZ-8	NC-18		
19	V Morgan	AUS	80	AC-1	SN-3			
20	P Mitchell	AUS	80	AC-2	SN-2			

F1B

1	I Kolic	YUG	152	VJ-1	VH-1	PC-1	CM-2	
2	O Kulakovsky	UKR	150	EF-1	VB-1	RN-2	SW-3	
3	B Silz	GER	147	BD-1	SC-1	VJ-2	VS-2	
4	A Andriukov	USA	128	CC-1	MM-2	HL-5		
5	Y Waltonen	FIN	121	CM-1	EF-2	UP-4	BC-4	
6	V Rosonoks	LAT	112	PZ-1	HL-3	EF-5	SW-6	
7	A Kutvonen	FIN	112	BC-1	UP-2	BD-9	EF-17	
8	S Stefanchuck	UKR	111	AN-1	EF-3	PZ-5	SW-5	
9	A Zeri	NED	110	PT-1	SN-3	AC-4	EF-9	
10	W Ghio	USA	103	MM-1	HC-3	HL-10	CC-21	
11	I Zilberg	GER	101	CC-2	BD-4	PZ-7	NC-6	
12	P Ruyter	NED	101	HL-2	SH-3	MM-5		
13	H Meusburger	AUT	100	HL-1	SH-4	VJ-6	PT-15	
14	R Blackam	AUS	99	AC-2	SN-2	MM-11		
15	A Bukin	UKR	95	SW-1	VB-5	EF-7	CC-12	
16	R Peers	GBR	94	SH-2	HL-4	MM-6	CC-20	
17	M Woodhouse	GBR	89	UP-1	VH-4	EF-16	MM-23	
18	A Chik	UKR	88	NC-1	AN-6	PZ-12		
19	J Krasznai	HUN	86	PZ-2	NC-2	VJ-5		
20	S Tedeschi	FRA	85	CM-3	VH-3	PT-5	NC-5	

Contests still to count for 2001: Soko Cup BIH, Sierra Cup USA, KRKA Cup SLO, Euro-Fly SUI.

SPIRIT 22, F1B BY RICHARD BLACKAM

Extracts from an article in FFQ, see page 126. We pick up the story from Spirit 5, published in FFn April 1989.

Spirit 6 was a replacement for Spirit 4 with the difference that the wing d-box was aluminium foil covered. This made an incredibly stiff wing and with the flutter problems gone the climb was dramatically improved; better than Spirit 5 and with a better glide as well. Spirit 6 went on to win many contests including the 1990 Trans Tasman, 1990/91 Australian Nationals and 1991 Australian Free Flight Society Champs. Once I achieved this level of basic climb/glide performance, I started to max-out regularly in contests (of course I was getting more experienced at lift picking as well). Spirit 6 was the first of my models to achieve this (in the 1990/91 Nationals). It consistently did 4:30 in early morning flights.

Spirits 7 and 8 were built together (in late 1989 just prior to the 1990 Trans Tasman in NZ) and were essentially the same as each other apart from Spirit 7 having a small diameter carbon tailboom. They were the same as Spirit 6 apart from the use of the AA27 wing section and only used foil covering on the wing centre panels (tips were balsa d-boxes). Spirit 7 was lost in that 1990 Trans Tasman but Spirit 8 went on to produce many reliable, good flights for me. It was a good model with perhaps slightly better performance in still air than Spirit 6.

Spirits 9 and 10 were very similar to 7 and 8. They were used in the 1991 World Champs in Yugoslavia. Spint 11 was really Spirit 10 with a new wing! A marginally different wing layout but with a new section (Gorban 89) and moulded Kevlar d-box. The wing was stronger and almost as stiff as the foil-skinned wings, but lighter and a lot easier to build.

Despite the benefits of the new Kevlar wing, Spirit 12 was built in March 1992 with a foil d-box wing; mainly because I was still trying to get maximum stiffness and structural stability. I was chasing some light carbon cloth for the next model, but in the meantime Spirit 12 had to be made. The wing had a new own-designed section and Spirit 12 went on to become a super Wake for me, winning many contests and getting me out of downdraft trouble. I was very proud of the 13.5g complete tailboom weight (balsa/glass construction), down from 17.5g on previous models. I still use it occasionally. I recall it producing around seven minutes one wet, cold morning at Omarama. After the '93 W/Ch I damaged the balsa/glass boom on Spirit 12 and replaced it with an Andriukov alu/carbon boom. All models after the end of 1993 have used these booms, which I regard as among the strongest and toughest available.

No Spirit 13 (you think I'm taking any unnecessary risks??). Spirit 14 was a copy of #12 but was damaged early in its life. For Spirit 15 I decided to try a new higher aspect ratio (16) wing of 1742 mm span, keeping most other layout measurements the same. I used a carbon fibre d-box for this and all subsequent wings (I'd finally managed to locate some light carbon fibre cloth). The wing was very stiff and the glide good, but I couldn't get it to climb as high as I liked. Recently I made some setup changes and have found a significant improvement in climb height as a result. Because of the problems with the climb I went back to a lower aspect ratio for several models after this.

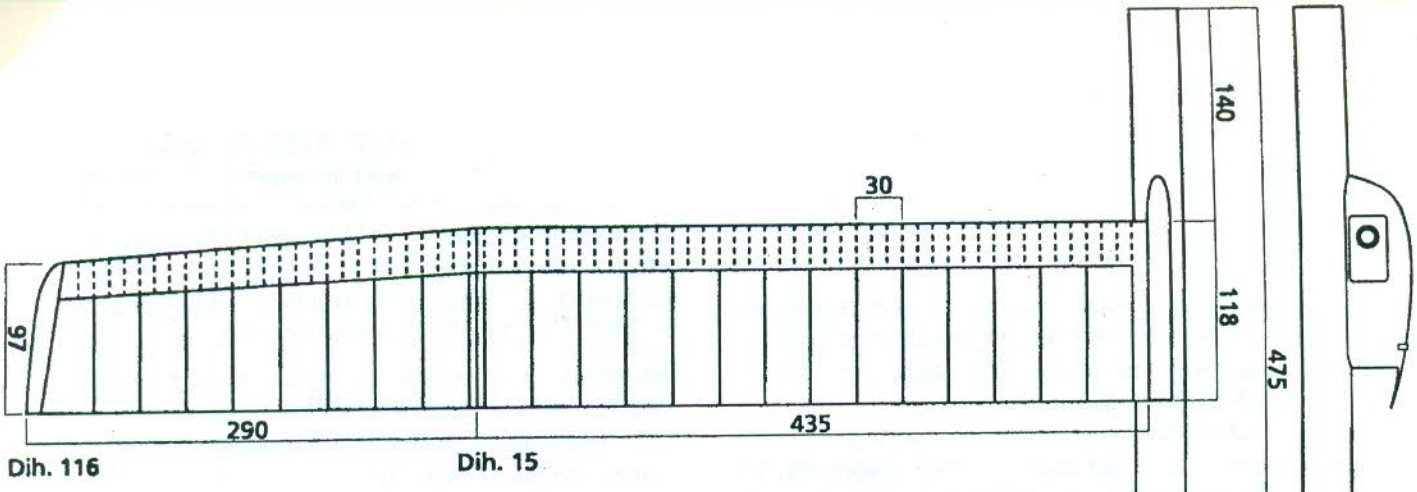
Number 16 is a very interesting and successful design to me. I built this in 1993 a few months prior to the US World Champs. My father, Don, also put an identical model together. The basic layout was much the same as Spirits 7-10, but I made some changes to the propeller and prop hub design and mostly wanted to try a new wing section. The section was essentially the same as Makarov's 1989 F1A section. This model glided really well and fell into any nearby thermal. Don used his 'Spirit 16' for several years and still reckons it the best contest model he's ever had (by a long margin). In fact he's often said that he thinks it may be the most successful single F1B in Australian history! Spirit 16 (my version) lives on with Terry Bond (well at least I think it still lives!).

The next in the series, Spirit 17, is another model which has done very well for me, although it's early history frustrated me no end. The design was a further 'gentle' development of the earlier models. I returned to a more conventional F1B wing section; a slightly modified AA29 section. I also built a 30 mm dia motor tube (all previous models had used 32 mm dia). This was also the first model which featured my moulded carbon/balsa prop blades, most previous blades being carved balsa/glass. From the start this model had really good performance with a significantly faster climb (during the initial power burst) than all previous models. I really thought I was on a winner here. Getting to use the model in competition was a different matter altogether. In at least three major events I had planned to use the model, only to experience a VIT failure in a practice flight immediately prior to round one! Eventually I found a little sharp area where the VIT line passed into the boom under the stab. The line was catching here and preventing the stab from changing at the appropriate moment. Testament to the Andriukov booms is that two of those crash scenarios involved the model diving at full power from 50 metres or so vertically into the ground damaging the wings but not the tailboom! Despite this inauspicious start, Spirit 17 went on to do very well indeed winning or helping to win many contests including my milestone fifth Nationals win at Nowra in 2000 and the 1995 Bodeland Cup in Germany. Spirit 18 was a variant on Spirit 17 with an Andriukov VP prop hub. See below for #19.

Spirit 20 was another high aspect ratio model with a span around 1950 mm. I have spent a couple of years trying to get this model going properly. The initial problem was that the model was under-elevated during the cruise although the glide trim was fine. With setup changes I'm pretty close now and the model climbs well and glides well. I learned a lot on this model about setting up a Wakefield and balancing the wing and stab sections, aspect ratio, CG etc. Nevertheless, I started to be uneasy about the generally accepted losses on wings with lower Reynolds Numbers (i.e. narrow chord, high aspect ratio).

Spirit 22 was a return to lower aspect ratio and with the application of various things I learned over the past few years was a really high performance F1B. It climbed as well as any model I had flown or seen others fly and the glide was excellent. I flew this model for over a year prior to the Israel WC and really pinned a lot of hopes on it. Unfortunately a bad crash in practise at the Israeli site meant I couldn't use it in either the warm-up or the WC. In fact the wing was so badly damaged that it was impossible to repair it adequately to take a DPR launch. Spirit 22 was a very interesting model for me. It (and Spirit 20) showed me that Reynolds Numbers Re of an F1B's wing is perhaps more important an issue than many think. The layout of that model is deliberately configured with very low wing taper in order to keep the Re relatively high across the whole span. I now believe that the higher R/N wings (i.e. wide chord, low aspect ratio) are much less critical to set up and adjust and very tolerant of a wide range of air conditions. Lower R/N wings (higher aspect ratio), as I found with Spirit 15 & 20 are capable of good performance, but need a lot more care to get them flying well.

Notes: Numbers 19, 23 and 24 were not true 'Spirits' since they were at least based around Andriukov design wings. Nevertheless they are not set up like Andriukov models—if you just copy the man you can't beat **him..**



Spirit 22

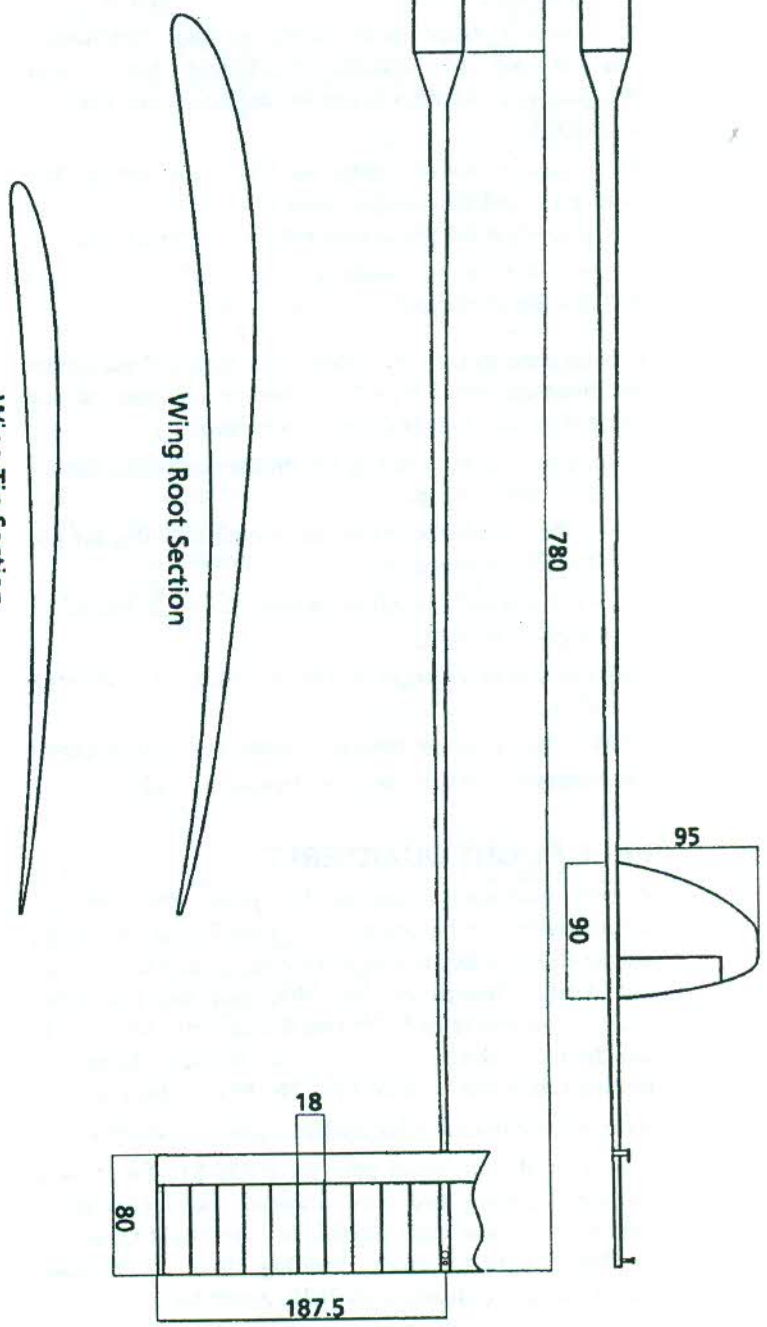
F1B by Richard Blackam
Australia

Area:
Wing: 15.98 dm^2
Stabilizer: 3.0 dm^2

Weights:
Wing: 58g
Stabilizer: 3.2g
Motor Tube: 72.5g
Boom: 14.5g
Front End: 46.8g

Trim:
CG: 72%
VIT: 4.2 seconds
VIW: 18 seconds
AR: 42 seconds

Construction:
Wing – CF D-box
Stab – Balsa D-box
Motor Tube – Kevlar
Pylon – Glass/CF
Boom – Andriukov Alum/CF
Prop Hub – Andriukov VP
Prop Blades – Andriukov



UK COMPETITION NEWS

MIDDLE WALLOP is the venue for a Coupe d'Hiver competition on December 2. There are now two additional events for power and glider run by SAM 1066/Crookham Contest Modellers. Both start at 10.00 and details are given below.

Combined Power. 3 flights with maximum to be decided on the day, and using the following engine runs:

Models with functions	7 sec
SLOP and Nostalgia models	11 sec
Vintage models	15 sec

The contest director for power is John Thompson, tel 01252 842471, email Johnd.Thompson@btinternet.com

Combined Glider. 3 flights with maximum to be decided on the day, and using the following towline lengths:

Models with bunt or zoom functions	30m
Straight tow models	50m
Vintage glider	100 m

a) Models fitted with zoom or bunt functions - can/will not be deemed a straight tow model, irrespective of whether zoom or bunt functions can be locked off.

b) Straight tow & vintage models - one turn position A/R only, and the towline must remain in contact with the flyer when the glider commences its timed flight.

Contest director for glider is Rod Audley, tel 01454 250354, email rodaudley@hotmail.com

It is planned to fly the contests to a 'normal' maximum and have unlimited fly-offs. However, changes may be made if circumstances dictate, for example:

1. Restrictions imposed by the military effecting the use of Middle Wallop.
2. Further outbreaks of foot and mouth affecting the use of the local Farmland.
3. Wind strength/direction deemed to be a hazard to people or property.

Any last minute changes will be posted on the following web sites:

SAM 1066	www.cavgrove.freeserve.co.uk/sam.html
Crookham	www.cavgrove.freeserve.co.uk

FREE FLIGHT QUARTERLY

A new Australian magazine has joined the ranks of aeromodelling publications with Free Flight Quarterly, whose Chief Editor is Sergio Montes. Launch date is at the World Champs at Lost Hills and the first issue included an article and plans on Richard Blackam's F1B which took third place at the World Champs – reproduced in this issue of FFn. The FFQ website is:

www.chariot.net.au/~bluejay/freeflightquarterly.html

The price of four issues per year is US $15 for readers outside Australia and New Zealand. Send cheque or international bank draft payable to Free Flight Quarterly to Free Flight Quarterly, Freiflug Haus, 37 Windsor Street, Kingston Beach TAS 7030, Australia.

NOTICEBOARD

SCHMIDT HOOK WANTED. Andrew Crisp would like to hear from any reader with an original Schmidt circle towhook (as sold by FFn). Contact Andrew at 4 Grove St, Summertown, Oxford OX2 7JT, tel 01865 553800.

RICHARD (DICK) JOHNSON'S MODELLING EQUIPMENT for sale from Paul Rowledge:

Hobbymat - BFE 65 Lathe / vertical milling / drilling machine. Incl tooling. nearly NEW

Tull – Heavy Duty, Double ended Grinder.

Nutool – 5 Speed column Drill.

V block - plus clamps.

Grey & Rushton – 12 inch vernier height gauge.

Depth Vernier - 7 inch.

Digital Vernier – metric 150mm.

Moore & Wright – 1 – 2 inch micrometer.

Biotrack BT-1 - plus 2 x transmitters.

Realistic - 40 Channel FM Transceiver.

Alba – CB 27 / 81.

Custom – Heat-sealing gun.

Feodorov – F1B Items (small selection available)

Russian hand crank motor starter + 2 volt generator incorporated.

Aluminium – model box.

Vacuum pump

Fuel 40 & 25% Nitro.

Balsa – Obechi - Large Quantity LE & TE.

Glass / Carbon cloth assorted types.

Aeromodellers – 60's to 2000. Complete.

ENGINES :-

- 2 - Nelson 15 SE.
- 1 - Nelson 15 RE.
- 3 - Rossi Mk1 (2 complete)
- 1 - Rossi Mk3.
- 1 - Rossi Mk2 with Strukov piston / liner.
- 1 - OS Max 40F plus spares.
- 1 - Super Tiger15 plus 2 pipes.
- 4 - Super Tiger 15 Split for spares.
- 1 - Cox 15.
- 1 - ED Racer.
- 1 - AM 10.
- 1 - Elfin 2.5 - radial mount.
- 2 - Nelson SE crankcases only.

Large selection of needle valves / glow plugs (No2 Rossi) Russian folding props /timers.

Flight box – Thunder starter, plus 3 – 12V batteries

Koster – Acoustic Tacho super 15.

MODELS :- (Complete)

- Dixelander with Cox 15.
- F1J – with Czech motor.
- F1C – Russian front end with Nelson 15 SE (minus tail) Kevlar wings.

3 - Russian front ends (various types and condition.)

All the above Dolores has asked me to sell for her, could you please send your offers to: Paul Rowledge 14, Greenacre Drive, Pencoed, Mid-Glam. CF35 6JB. or phone 01656 861059.

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