Free Flight news FFn

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DIARY

October 8-14 Lost Hills, USA	World Championship F1A, F1B, F1C.
October 13-14 Oberkotzau, Germany	F1E WORLD CUP F1E. Entry: DM55. Contact: P Kuttler, Schneebergstr. 26, 94145 Oberkotzau, Germany, tel: +49 92 86 61 87, Email: bkoenig@topmail.de
October 18-21 Sacramento, USA	Sierra Cup 25 WORLD CUP F1A, F1B, F1C, F1G , F1H, F1J. Entry: US$50. Contact: R Simpson, 9159 Hubbard Ct, Elk Grove, CA 95624, USA , tel: +1 916 686 1301, Email: rksimpson@prodigy.net
October 20-21 Novo Mesto, Sent Jernej, Slovenia	KRKA Cup WORLD CUP F1A, F1B, F1C. Entry: DM50. Contact: D Zulic, Nahtigalova 5, 8000 Novo Mesto, Slovenia, tel: +386 41 610 737, fax: +386 7 33 75 701, Email: damjan.zulic@insert.si
October 21 Impington Viillage College, Cambridge	Impington Village College indoor flying. See FFn 0106. Fun fly, comps for Malmstrom's Hanriot design and for Butterfly RTF rubber model. Contact 01223 860498.
October 21 Middle Wallop	Croydon Wakefield Day. F1B, 8oz & 4oz vintage, classic (1950-60) Wakefields, plus P30 and Prima F1B events. See FFn 0108 - note comments on possible limited flyoffs. Contact D Beales, tel 0208 265 7846.
Oct 31 - Nov 4 Tivat, Yugoslavia	Montenegro Cup WORLD CUP F1A, F1B, F1C, F1G, F1H, F1J. Contact: Gverovic Edvard, Mazina 99, Tivat, Yugoslavia, tel: +381 82 672 280, fax: +381 82 672 280.
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. Contact: Mrsovic Milos, Srpskih Vladara 26, 11000 Beograd, Yugoslavia, tel: +381 11 686 618, fax: +381 11 659 705.
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 29 Saturday Church Fenton	Coupe International 2001. 80g, 100g and vintage Coupe. See FFn 0109. Contact D Davitt.

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THE BRITISH TEAMS FOR CALIFORNIA

Our thanks to all those team members who have taken time out from their preparations, and their work and family commitments, to bring us up to date on their pre-World Champs thoughts. First, in F1A, from **Chris Edge**…

It would be nice to talk about all the practice and competition flying, and the model development, that I have done since being selected for the team. However, the foot and mouth disease story in the UK is well known, and all those plans went out of the window. However, there is still a story to tell that might interest FFn readers – why has it taken me nine years to get back in the team?

In 1992 at the European Championships at Sibiu I had a box of five fully trimmed models. By the end of 1993 the box was empty (models lost and damaged, but not replaced because I was moving house), so something had to be done. The sensible step would have been to build a couple of small rounds models but no, I built a 2.4 metre long model for fly-offs! Still, this model (No. 37 –'Skip Yogi') did quite well over the years but didn't help me into the team. By the end of 1994 new models were designed based on my 'Carbon-Ate' design of the mid '80s. The retrograde nature of the model was compounded by the use of a simple zoom launch, but more surprising to most observers was the wide rib spacing in the wing, some 130mm – the model looked like an oversized indoor machine and hence was dubbed 'Easy A'. Two were built (Nos 38 & 39) and flown almost exclusively for the new few years, though with only limited success. This was partly a function of the old wing section (from Quarnstrom's 1979 model) and the still air time was poor. No 39 was lost at Beaulieu in 1999.

In late 1996 I finished a new version of my 'Vertically Challenged' design (No. 40). A new wing using twin M&K joiners, a 14.3mm wide root spar and a D-box constructed from three layers of a new carbon/kevlar cloth was made. The resultant wing was stiff in torsion but heavy at 200 grms/half. Combined with an old "condom" type fuselage the whole model was overweight but has lasted well. At the same time, a set of spars and D-boxes were started for an equivalent structural version of 'Skip Yogi' (No. 41). It took a further 18 months before the model, resplendent with the Danish Jensen electronic timer, was finished; this model is now my preferred still air/fly-off model. The incorporation of the DeBoer/Nyhegn servo drive mechanics has enabled higher launches to be achieved with little loss in reliability, but the down side was that the heavy wing put the model over weight by a considerable amount. Despite that, results were getting better and models 40 and 41 were used extensively to the point where I was reserve for two teams, including that for Romania in 2000.

In late 1999 I realised that No. 40 was my only good rounds model so a new version was started. Model 42 took until 2001 to complete (I got distracted by other things…) but now looks really useful. In order to save weight a wing structure was developed using a new carbon composite spar material – as used on the European fighter aircraft – and lighter D-boxes. This lighter wing (about 170 grms) offset the weight of the new Jensen timer to such an extent that 20 grms of ballast was now required. This model launches the best of any I have had, and will be the preferred rounds model in Lost Hills. Nos 40 and 41 have also been upgraded with new fuselages, which has helped matters by reducing weight. By this stage, with the help of Nos 40 and 41, I finally made the team again and after nine long years the model box is again full.

I now have model No 37 (mechanical bunt fly-offs model), 38 (zoom rounds model) 40 (mechanical bunt rounds model), 41 (electronic bunt fly-off model) and 42 (electronic bunt rounds model), and my confidence is building after some good trimming sessions on local farmland.

Competition flying at the time of writing has been limited to two contests – at Lost Hills in April and the Stonehenge Cup in September. The models were not trimmed in April but were flown anyway during a fun weekend that taught me a great deal. At the 'Henge, I used model 38 on a windy day to place 2nd.

Travel arrangements to the States were made to maximise the number of days I had on the site prior to the contest. My aims at the contest are to do the seven maxes in a champs – at last – and to come home having not put on too much weight.

John Williams is taking five models, all with bunt, three 'small' and two large for the first rounds and for fly-offs. Four of the five are more than a year old. The new one, bought from Stamov (John's first bought model), is not going well and is unlikely to be used much:

I have only flown in three competitions this year – Hungary, France and the Ukraine – though I have done some useful trimming at Newmarket Race Course. Because of foot and mouth, and the consequent lack of activity, I don't think I'm flying as well as usual. But with some time in the States before the main contest, I hope to remember how it's really done!

Anthony Ball will be taking his two familiar red, white and blue models – one built for Italy in '96 – plus a lower aspect ratio F1A for emergencies only. There is also a new model, with a 2.6m span, six-panel wing, and swept-back tips. This has been causing some problems, and the three-position wing wiggler has now been adjusted for use with two positions only.

In F1B, **Mike Woodhouse** is taking six models…

…the only six that I have. I find it impossible to keep more than that number sorted out. In actual fact, this is the greatest number of sorted F1Bs that I have ever had! The models are all part of the on-going Whiskas story. Although the models are numbered it does not really relate to development history – they are like the famous axe, it's the same axe except for several new handles and heads (read props, wings etc!) The basic layouts are all the same. The only differences are in the wings and the detail of the structures.

Numbers 50 and 54 are the short models with a 120mm chord wing that uses my old "Wichita" glider section that has been thinned and flattened towards the tips. I will probably use 50 in the event of strong lift and thermals, with 54 being held in reserve. Despite being of relatively small span these models glide well, and are what I prefer to use in British weather.

Numbers 55, 57 and 58 are the main models, with 115mm chord wings. The section is the good old Benedek b-6356-b thinned and flattened towards the tip. Two of these, 55 and 57, are intended for the main work in the contest. Both these models feature rib-less carbon D-boxes on the wings. This is probably the only real innovation in my models. Since I moved to this structure most of the new wings have been built this way. The thinning of the section has not hurt the glide but it has improved the rate of climb – this is also evident on 50 and 54. 58 is a reserve which has just been re-winged. It had the same wing as 56 but also had a trick of going left at the end of the climb – the replacement wing is a refurbished one that features a D-box from the carbon/Kevlar mix material. It had previously been relegated, as it was a bit "softer" than the all carbon wings. This wing now works well.

Number 56 is the big model at 110mm chord and uses the AA section. I have yet to be convinced that it performs better than the Benedek-winged models. I will try it at Lost Hills and it will probably be the fourth-choice model. This wing also has a rib-less D-box.

All the models use Aundruikov's variable pitch props. I will be taking three complete front ends and blades as spares – according to the rules it is allowed. All the prop units are the same and are interchangeable.

The rubber will be from October '97 and May '99. The motors will be made up to 28 strands and between 350 to 370mm long. The plan is to use the '99 rubber in the quiet rounds and the October stuff in the heat of the day. The number of turns should be 450 to 500 dependant upon length, the run off being about 10 turns per second. Well, that's the target!

I was really looking forward to the trip, as the site is the best in the world and the weather is almost guaranteed, but it now been tarnished by the terrible events of September 11th. However, trying to set this to one side and looking at the team, its inherent ability and experience, plus the level of support we will have, there'll be no room for excuses if we don't get a good result!

Russell Peers will be taking seven models…

…and they're all, of course, variants of my Head Beagle design. The earlier models – 24 and 25 – have DPR and more recent ones, 27-31, have variable pitch DPR. All the props are from Andruikov.

The newest model, 31, was finished in December 2000. It has a thicker wing section than some of the earlier variants, a change in thrust-lines (to three degrees right and three degrees down) and some minor changes in the warps. It was built for windy conditions, for rounds and for trials meetings.

The rubber I will be using is from the '97 World Champs batch (probably for the first rounds and any fly-offs), from May '98 and July '99. The '98 batch seems to be particularly good in the heat.

Having Phil Ball on the flight line will, as ever, be a big help – he's a sort of second Terry Dilks for me. I'm looking forward to another Champs, and am proud to be representing my country, at my chosen sport, and as an international gadabout. Given recent history of course, let's hope that all the teams arrive, and arrive safely.

John Billam will also be taking seven models…

…five in full trim, plus two new ones that I built late last year – they've been flown but are probably not quite right yet. The most reliable of the models – the banker – is No 3, one of the first models I built after I returned to Wakefield four year ago following a 20+ year lay-off. It has a 1.52m span, with a wing section combining Koster (underneath) and Benedek (on top) – it's not turbulated. The remainder of the models have spans ranging from 1.65m (Nos 8 and 10) to 1.8m (No22). The models are all variations on a theme – No 8, for example, has a thin section, a turbulator and invigorators.

The props are Andruikov's, four of them with variable pitch. The models combine booms, joiners, timers and other items from various suppliers (Feodorov, Vivchar, Burdov and of course Andruikov), though I tend to make my own wings, wing wigglers, rudder stops, and so on. Some of the more recent models however have Vivchar wings, which I bought after seeing the fantastic glide on Geoff Kent's models.

I've got about 120 motors, taken from five batches of rubber, October '97, May '99, October '99 (which seems to me to be the best), and June '01.

In F1C, **Stafford Screen**, like everyone else, has had a difficult time:

This has been a lost year. Model development has come to a standstill. I visited Hungary and Poitou (where it was windy) but I only flew old models, and did little or no trimming, and what I did do was a mistake. The Stonehenge Cup was a problem and one way or another I've only had about three practice days this year, and parts of those were too windy for any successful work to be done.

My development project with the Verbitski Reductor has been equally difficult because of technical problems. Verbitski has been most helpful but I crashed the model when the timer failed to start on the second flight after the motor had been returned, and it went back to the Ukraine for a second time. It's now back again, but rather too late. Indeed, I am not sure of the Reductor and may not continue with the development work. Electronic timers and prop development may be a better way to progress.

In consequence I will now be taking six models to Lost Hills – No 36 (small, foil-covered), 39 (2nd in the Euro Champs in '96, it has a D-box, but is a reserve model only), 40 (another with a D-box, this was the model flown at Poitou this year), 43 (foil-covered and used at the Maxmen in both '99 and 2000), 44 (also with a D-

box and used in Israel in ’99), and 45 (another with a D-box, it has a 2.86m span and plug-in wing tips).

I’m looking forward to returning to Lost Hills and this time I’ll also be taking F1Js for a change. A big problem these days is the UK weather. Even in normal years it is simply not as good as it was in the ’50s.

Peter Watson will be taking five models but was planning a late decision on which five it should be:

The lack of flying this year has at least meant that I have not broken or lost anything (yet), and have managed to do some building. I am fairly well off for models. All the models that I have flown at the last few Champs are still flyable, although I do not consider any of them to be particularly good.

Model 28 was built during last winter, trimmed at Lost Hills in February, and looks promising. The latest model, 29, was completed recently and trimmed out fairly easily, which I always think is a good sign. Going back a bit there is model 25, which was build during the winter of ’98 and is at last, I think, under control. All three of these models have six-panel D-box wings, which vary slightly in section and in span, between 100 ins and 104 ins.

I find it virtually impossible to assess which is the best of these models under the weather conditions, and with the flying fields, that we’ve got in this country. But all three of them will probably go, in anticipation of the likely good weather in the USA, along with two smaller models in case of a windy day – I remember one of the practice days at the ’93 Champs when a storm blew through. I find the smaller models much easier to handle in the wind.

One of these two smaller models may be No 10, which has parts from the first foil-winged model I ever built. The original model met its end at the 6th Area event in 2000, when the lines were accidentally cyanoed together following a field repair to the fin. The fuselage has been rebuilt and now has a D-box wing of 87 ins span. The model handled the last two, windy rounds at Poitou this year quite well (but please don’t mention the fly-off…).

Some of my models which were covered in Fibafilm have now been recovered in Saltzer tissue. I felt that I could never get Fibafilm to stick to the structures as well as I wished, hence the change to tissue. This adhesion problem may now be history since I have recently discovered UGL Safe Grip glue, which seems to be vastly superior to anything else that I have used for covering with plastic materials. There is always the possibility that the tissue-covered finish may glide better – it seems to be true with F1As.

John Cuthbert will also be taking five models, none of them the models that he took to Romania for last year’s European Champs:

I’ve got one Verbitski Reductor, and two models with Verbitski wings on my own fuselages and with my own tails. In addition I have a new model with a 2.3m six-panel wing, lower aspect ratio than usual in case the weather is rough, plus one older model for emergencies. The models have side-exhaust Nelson engines and, apart from the Reductor, they all use my own props.

The Reductor has been giving some trouble, mainly with what seems to be some delamination of the carbon round the bobbin on which the prop blades pivot. I think there may be too little material there but I’ve got spare blades so it should be OK.

I’m feeling well prepared this year and I’m sure my models are better than in the past. I’ve tried to keep in trim by making a number of foreign trips – seven so far this year – as well as flying in the UK whenever possible. I just have to make sure I don’t put the model in a downdraft like I did in France.

And finally, a few musings from Team Manager **Martin Dilly**:

I'd thought that with a team, a manager and an assistant decided by late last year and with Salisbury Plain, probably the best flying site in the country, available for 28 weekends, by the time October arrived we'd have had so much practice that over-training might be a problem.

Foot and mouth changed all that, and we didn't get back on the Plain until early July, with a single usable weekend at the start of the year. The sole domestic contest was three weeks before the Championships and held on a weekend with a forecast of Force 5 winds, so for many of us Poitou was the only chance to fly seriously.

From the team manager's viewpoint the delays in publishing the only two information bulletins we’re received from the organisers (and we've had nothing since about April!) have led to difficulties, in particular with flight bookings and distributing details to possible supporters. There is perhaps a case for the CIAM organisers’ guide to include a sample entry form layout for Championships. With a group of 38 going from Britain, I’ve been like a travel agent for the last six months, and arranging the box handling and loading with BA has presented numerous problems. However, the main difficulty, and the most time-wasting, has been the inability of some team members, and supporters, to stick to a few important deadlines for information or payments. One of them, already nearly a week late, finally, and after much phoning, sent the cheque for his airfare by second class post "because I always do", thus risking the loss of the entire British Airways booking for 27 people. It was a close call.

On the more positive side, we have a strong team, with a lot of international experience, and several have already flown this year at Lost Hills. Phil Ball has handled the car rental and the model processing (and at the time of writing, three weeks before the event, is still waiting for some people to send in the data!). Motorola, thanks to Bob Cheesley, have provided ten US-legal radios, Biotrack have again supported us and we will have supplies of Electrolade to ward off dehydration on those 'two gallon days', thanks again to Eastern Pharmaceuticals. We have an enthusiastic band of supporters, but will, of course, greatly miss that veteran enthusiast, Dick Johnson, who, with Dolores, helped UK teams all over the world for decades.

Michael Warren

SUMMER CUP, Stalowa Wola,Poland,Aug 3-5

F1A 22 flew

1	P Findahl	SWE	1290	+300	+220
2	Y Artemenko	UKR	1290	+300	+102
3	R Fedishyn	UKR	1290	+278	
4	J Kurgan	POL	1290	+263	
5	O Pszenicznyj	UKR	1290	+145	
6	R Golubowski	POL	1290		
7	Brazenasromas	LTU	1238		
8	S Kubit	POL	1229		
9	W Wolkov	UKR	1222		

F1B 14 flew, 8 in flyoff

1	A Bukin	UKR	1230	+500	
2	V Ivanczikas	LTU	1230	+413	
3	O Kulakovsky	UKR	1230	+402	+439
4	O Krysko	UKR	1230	+402	+415
5	S Stefanchuck	UKR	1230	+364	
6	V Rosonoks	LAT	1230	+355	

F1C 5 flew

1	Z Szablewszki	POL	1298		
2	P Plachetka	POL	1207		
3	E Burek	POL	1144		

ISRAEL FF CHAMPS,Beer Sheva Aug 24-25

F1A 103 flew (including 45 juniors)

1	M Moskovich	ISR	930	+231	
2	R Herzberg	ISR	930	+221	
3	N Nachmias	ISR	930	+218	
4	E Galor	ISR	930	+203	
5	Y Kraus	ISR	930	+189	
5	A Baruch	ISR	930	+189	
7	L Livne (J)	ISR	930	+167	
8	G Shochat	ISR	930	+122	
9	Y Shtein (J)	ISR	930		
9	S Shrayber	ISR	930		
11	B Lerrer	ISR	926		
12	S Faraji	ISR	925		

F1B 28 flew

1	I Itzhak	ISR	930	+135	
2	R Herzberg	ISR	930	+126	
3	G Herzberg	ISR	930	+89	
4	G Hagai	ISR	930	+85	
5	S Faibish (J)	ISR	930	+79	
6	I Melamed	ISR	930	+75	
7	A Aharoni	ISR	930	+66	
8	G Varmaz (J)	ISR	930	+62	
9	S Kuflik	ISR	930	+37	
10	G Mark	ISR	930	+17	
11	I Shani (J)	ISR	930	+4	

F1C 1 flew

1	U Zilbershtein	ISR	586		

EIFEL-POKAL, Zulpich, Aug 30 - Sept 2

F1C 13 flew

1	A Molchanov	UKR	1320	+300	
2	P Maurer	SUI	1320	+281	
3	T Schwend	GER	1320	+216	
4	S Reinwald	GER	1320	+188	
5	G Aringer	AUT	1305		
6	A Roux	FRA	1282		

F1A 73 flew

1	F Kerner	HUN	1290	+300	+217
2	A van Eldik	NED	1290	+300	+104
3	P Drapeau (J)	FRA	1290	+245	
4	S Rumpp	GER	1278		
5	W Gerlach	GER	1276		
6	V Crougenec	FRA	1258		
7	A van Wallene	NED	1256		
8	U Edlund	SWE	1254		
9	B Nyhegn	DEN	1244		
9	T Schwend	GER	1244		
11	J Rabes	GER	1243		
12	I Yablonovsky	UKR	1239		
13	W Bellen	NED	1235		
14	J Challine	FRA	1220		
15	R Kreetz	NED	1216		
16	A Szekelyhidi	HUN	1210		
17	R Brinker	GER	1209		
18	I Kreetz	NED	1208		
19	R Holzleitner	AUT	1207		
19	V Vivchar (J)	UKR	1207		

F1B 48 flew, 23 in flyoff

1	O Kulakovsky	UKR	1290	+300	+420	+398
2	Y Waltonen	FIN	1290	+300	+420	+321
3	S Stefanchuck	UKR	1290	+300	+420	+310
4	A Shagun	UKR	1290	+300	+400	
5	V Rosonoks	EST	1290	+300	+361	
6	J Korsgard	DEN	1290	+300	+349	
7	A Bukin	UKR	1290	+300	+346	
8	I Zilberg	GER	1290	+300	+335	
9	A Zeri	NED	1290	+300	+328	
10	M Varadi	HUN	1290	+300	+290	
11	H Wagner	AUT	1290	+300	+281	
12	T Sarpila	FIN	1290	+300	+280	
13	R Seifert	GER	1290	+300	+275	
14	I Vivchar	UKR	1290	+300	+267	
15	P Monninghoff	GER	1290	+300	+263	
16	M Woodhouse	GBR	1290	+300	+261	
17	A Kutvonen	FIN	1290	+300	+11	
18	T Andre	NED	1290	+299		

BRAND CUP, Prilep, Macedonia, Sept 8-9

First day of competition (F1A) was flown in sunny weather and wind of 0 to 3 m/s. The second day (F1B and F1C) was sunny with some clouds, but with changeable wind direction and an increase of wind speed, which caused two changes of the flight line. After the fifth round the wind strength was 11–13 m/s and the remaining two rounds were cancelled.

F1A 11 flew

1	Z Velkoski	MKD	1290
2	Z Nikolovski	MKD	1286
3	I Panov	MKD	951
4	N Mitrevski	MKD	599
5	N Janeski	MKD	490
6	G Cejkov	MKD	458

F1B 7 flew

1	I Kolic	YUG	930
2	P Kolic	YUG	873
3	N Mitreski	MKD	756
4	I Panov	MKD	148

F1C 2 flew

1	K Stojanovski	MKD	859

JOHN BAILEY SECTIONS

Below and on the following pages are digitised tables from the drawings of John Bailey's F1G and F1J models which were published in FFn earlier in the year.

BAILEY F1J Nose radius=0.517 Upper surface max= 6.70 at 40 Camber max= 3.53 at 47 Max thickness= 6.83 at 25 Area= 459									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	0.000	1.396	2.017	2.853	3.554	4.170	5.077	5.634	6.106
YL	0.000	-1.006	-1.257	-1.503	-1.438	-1.364	-1.259	-1.081	-.720
X	30	40	50	60	70	80	90	95	100
YU	6.467	6.701	6.362	5.680	4.724	3.462	1.997	1.173	0.369
YL	-.316	0.193	0.703	0.952	0.916	0.737	0.343	0.035	-.368

BAILEY F1J TAIL Nose radius=1 Upper surface max= 8.30 at 33 Camber max= 4.15 at 33 Max thickness= 8.30 at 33 Area= 582									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	1.390	2.984	3.616	4.557	5.281	5.870	6.795	7.457	7.957
YL	1.390	0.070	0.040	0.020	0.005	0.000	0.000	0.000	0.000
X	30	40	50	60	70	80	90	95	100
YU	8.249	8.164	7.625	6.695	5.489	4.097	2.510	1.646	0.815
YL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Bailey F1G tail Nose radius=0.8 Upper surface max= 6.21 at 12 Camber max= 3.12 at 9 Max thickness= 6.21 at 12 Area= 419									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	1.857	3.577	4.496	5.587	6.048	6.203	6.091	6.003	5.826
YL	1.857	0.789	0.604	0.343	0.182	0.000	0.000	0.000	0.000
X	30	40	50	60	70	80	90	95	100
YU	5.615	5.161	4.654	4.093	3.480	2.736	1.860	1.407	0.952
YL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STONEHENGE CUP 2001, SCULTHORPE, SEPT 15-16

There was a subdued air about this event, partly because the weather was unkind – windy and occasionally wet on Saturday, bright but chilly and windy on Sunday – but mainly because it took place only a few days after the horrors in New York and Washington. Few people could entirely shake off the hellish visions that had filled our TV screens, and haunted our minds, during that terrible week.

At a parochial level it seemed unfair that our one major event in a year ruined in the UK by foot and mouth disease should suffer with the weather, but it did. The wind was so brisk – near or at the limit for some periods – that the models were flying out of the field even with a reduced max (and Sculthorpe is *big*). This necessitated detours into the surrounding countryside through the single access gate, and the repeated use of disinfectant on boots and shoes to reduce the risk of spreading – reviving – the foot and mouth outbreak.

Nevertheless there were many positive things about the weekend. There was some impressive flying, people were meeting again after a gap of several months (perhaps particularly important at such an appalling time?), and, on Sunday if not Saturday, the weather was beautiful even if the wind made it tricky for those competing. The organisers did a good and much-valued job in providing us with a flying field, and a contest, in a difficult year.

The weather forecast for the weekend had been bad, and this no doubt reduced the numbers attending. The reality on Saturday morning – a frisky, gusty wind and the clear threat of rain – certainly reduced the number competing, and also resulted in a reduction of the max to two minutes. In F1B Russell Peers' day started with his torque meter collapsing whilst he was winding, and the resulting demolition of one of his models: 'It was a Wakefield, and now it's a kit,' as Russell put it. He has work to do, not least on a new torque meter, before leaving for California. Later in the morning, the normally ultra-reliable Pim Ruyter had a prop release failure, though the reflight was successful, and in the rough conditions very few people were managing to max.

Bailey F1G wing root Nose radius=0.8 Upper surface max= 8.92 at 33 Camber max= 5.92 at 45 Max thickness= 6.72 at 25 Area= 437									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	0.000	1.892	2.782	4.243	5.257	5.986	7.148	8.037	8.573
YL	0.000	-1.020	-1.045	-.675	-.259	0.169	0.858	1.416	1.853
X	30	40	50	60	70	80	90	95	100
YU	8.846	8.859	8.421	7.585	6.378	4.825	2.892	1.715	0.420
YL	2.240	2.955	3.236	3.269	3.102	2.547	1.299	0.494	-.419

Bailey F1G wing tip Nose radius=0.75 Upper surface max= 5.74 at 40 Camber max= 3.76 at 45 Max thickness= 4.60 at 17 Area= 334									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	0.000	1.266	1.820	2.709	3.450	4.002	4.772	5.196	5.455
YL	0.000	-.818	-.827	-.713	-.467	-.221	0.206	0.621	0.969
X	30	40	50	60	70	80	90	95	100
YU	5.603	5.744	5.594	5.155	4.423	3.468	2.261	1.526	0.729
YL	1.256	1.693	1.877	1.853	1.584	1.012	0.270	-.188	-.729

Bailey F1G No.8 wing root Nose radius=0.632 Upper surface max= 7.38 at 40 Camber max= 5.40 at 50 Max thickness= 5.16 at 17 Area= 332									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	0.000	1.459	2.358	3.589	4.436	5.119	5.946	6.502	6.889
YL	0.000	-.677	-.655	-.357	-.034	0.271	0.811	1.376	1.852
X	30	40	50	60	70	80	90	95	100
YU	7.124	7.377	7.265	6.811	5.938	4.611	2.727	1.621	0.387
YL	2.305	3.038	3.542	3.773	3.524	2.760	1.429	0.566	-.387

Bailey F1G No.8 wing tip Nose radius=0.717 Upper surface max= 5.81 at 40 Camber max= 3.84 at 45 Max thickness= 4.58 at 17 Area= 334									
X	0	1.25	2.5	5	7.5	10	15	20	25
YU	0.000	1.224	1.790	2.711	3.482	4.091	4.831	5.249	5.517
YL	0.000	-.784	-.793	-.690	-.474	-.193	0.278	0.696	1.022
X	30	40	50	60	70	80	90	95	100
YU	5.678	5.811	5.655	5.242	4.541	3.631	2.371	1.594	0.681
YL	1.316	1.805	1.956	1.916	1.681	1.111	0.407	-.076	-.681

There had been one or two brief showers in the morning, but the big rain arrived in the early afternoon, shortly after the start of the fourth round. Mike Woolner and Peers had been well prepared, saw the rain coming, and flew early in the round. Indeed, Peers had started winding before the round, which caused some muttering amongst those that thought it wasn't allowed, though it's only in fly-offs that winding isn't permitted in advance of the round starting.

When the rain stopped there was a lull in the wind for about 15 minutes (this was the calmest part of the weekend) and several people took advantage of it. Glyn Turnbull was one of the first to fly. His orange-winged, Matthews/Ackerlely-style Wakefield, with heavily-tapered tips on a low aspect ratio wing and a double-tapered low aspect ratio tailplane, climbed steadily and impressively against the dark, still-threatening sky.

Only two people, Woolner and Peers, maxed out (not surprisingly, several had given up en route), and just after 5 p.m., in breezy conditions, it was Woolner who won, after an impressive flight - the better climb and the better air.

In F1C, Stafford Screen did not get back from downwind in time to make his last flight, leaving Peter Watson and John Cuthbert to fly-off. Cuthbert had switched from his familiar Stinger designs – see FFn July '99 – to a higher aspect ratio model with a bought wing (not the geared model), and though both flyers maxed in the first fly-off, Cuthbert was then the clear winner.

There was a pleasant dinner at the Construction Centre at Bircham Newton, which was also providing accommodation. It was one of those nights when you go to sleep listening to the wind roaring through the trees…

Sunday morning was lovely, with a clear, pale blue, virtually cloud-free sky. It was a wonderful contrast to the previous, grey day. On the other hand, it was seriously windy. Despite this, and working on the reasonable assumption that the wind would get worse, contest director Stafford Screen opted for a 3½ minute first round max in F1A and within an hour it was clear that we were unlikely to need a big fly-off. The majority of scores in that first round were, it

was agreed, awful (and there was more than one broken model), though there were also splendid maxes from Stamov, Findahl and Crisp amongst others. Gary Madelin had a line break on launch and the upward inertia of the snapped line was enough to tear the tailplane in half, leaving the model to glide in, and glide remarkably well considering it had only half a stab. Chris Edge towed in and later DTd early (but he won't do it in California…) and Tony Ball was also having a difficult time.

As the day progressed, the wind speed increased somewhat and – again – several competitors decided that they'd had enough, and retired. Two flyers stood out however. Stamov looked superb in the tough conditions, controlled and fearless. Indeed he seemed to be getting stronger as the wind speed increased, and it was a shock when his lift-picking skills suddenly seemed to desert him and he dropped, badly, both the last two rounds.

Per Findahl, however, continued to fly well throughout the day and was the only one to max out. His model appeared to be a fairly old aircraft, which had been updated and rebuilt. It had an 'old-fashioned' balsa tail, and the wing had a balsa trailing edge (probably the only one on the field apart from Andy Crisp's) with the rib cap strips – a relatively recent addition? – extending backwards to the very edge of the wing.

It was a difficult weekend in many ways, but it was good to be at a UK contest again. Let's hope that next year, one way and another, will be a whole lot better than this.

Michael Warren

F1A 18 flew

1	P Findahl	SWE	990
2	C Edge	GBR	849
3	A Crisp	GBR	813
4	V Stamov	UKR	812
5	A Chamberlain	GBR	788
6	S Darmon	GBR	771
7	P Williams	GBR	736
8	A Cameron	GBR	720
9	A Ball	GBR	703

F1B 24 flew

1	M Woolner	GBR	750	+240
2	R Peers	GBR	750	+212
3	P Ruyter	NED	745	
4	H Meusburger	AUT	728	
5	G Stringer	GBR	720	
6	K Chamberlain	GBR	713	
7	I Vivchar	UKR	693	
8	D Greaves	GBR	687	
9	G Turnbull	GBR	664	
10	B Halford	GBR	631	
11	B Aslett	GBR	594	
11	J Flynn	GBR	594	

F1C 10 flew

1	J Cuthbert	GBR	750	+240	+330
2	P Watson	GBR	750	+240	+217
3	P Ball	GBR	640		
4	S Screen	GBR	630		
5	C Gretter	GER	390		

F1E EVENTS AT MIKULAS, SLOVAKIA

Mikulas Cup 15 September

World Cup event organised by Hungary

34 flew

1	D Petcu	ROM	500.00	+384
2	I Treger	SVK	500.00	+278
3	M Valastiak	SVK	500.00	+233
4	P Nosko	SVK	491.33	
5	G Arghir	ROM	486.67	
6	M Popescu	ROM	486.00	
7	J Asboth	HUN	483.00	
8	L Kovacs	HUN	482.00	
9	F Draghici	ROM	481.00	
10	E Mang	AUT	480.00	

Liptov Cup 20 September

World Cup event organised by Slovakia, postponed from Sept 16 because of unflyable weather on that day.

30 flew

1	M Noskova (J)	SVK	500.00	+420
2	M Popescu	ROM	500.00	+404
3	J Valastiak	SVK	500.00	+248
4	D Petcu	ROM	482.67	
5	F Mang	AUT	476.33	
6	M Valastiak	SVK	475.00	
7	F Doupovec	CZE	474.00	
8	Z Vojtok	CZE	467.67	
9	P Nosko	SVK	466.67	
10	J Orel	CZE	461.50	

BODENLAND AUG 24-26 Report by Dave Hipperson (results published last month)

This event has been a regular fixture in former East Germany for ten years. Your reporter flew at it in 1993 and this was his first return. Since then the standard of organisation and the numbers competing have increased substantially.

As in previous years the day before the World Cup proper, registration day, as well as allowing trimming, included a selection of non-FM warm up events. Namely Tailless glider, FIC-X (UK Slow Open Power Rules) and for juniors only Al and CDH. These later two were very sparsely contested. Organisers could take FAI registrations and at the same time run these less formal events conveniently situated in the shade of a copse of trees on a slight hill in approximately the centre of what was to be the flying field. Their well equipped control caravan although looking decidedly agricultural on the exterior was immaculate and well appointed inside with no less than three persons handing the paper work admirably.

The field itself, one of the best in Germany, comprised most of the farmland to the South of the tiny hamlet of Hakeborn four kilometres to the south west of Egeln which itself was 30 or so south west of Magdeburg. They were mostly clear of barley, some still a bit stubbly but the soil itself was very soft and light and forgiving if

rather dusty as we discovered as the days wore on. There was some maize still uncut but it never figured. There were some woods too. Forests might have been a better description. Enormous affairs with tree sizes to match, deciduous and pine mixed and very beautiful for anything but model retrieving. Fortunately winds stayed so light for the entire weekend that few models strayed into them. The nearest and biggest was only a mile or so South but drifts seemed to stay from the East or West - rarely from the North. Timer failure flyaways sometimes had to negotiate them however - Ossi Kipelainen being one, dropping his best model into them at over 20 minutes. He could still hear it from the flight line so there was no question of optimistically hoping it had fallen though the canopy!

The topography was hardly flat and when there are humps and bumps laying out a flight line becomes a delicate operation. In this case it was run out along the top of a slight ridge that gave adequate vision into the valleys either side but might have been rather turbulent given more wind. These hazards aside it was a picturesque place with easy vehicular access to everything - you simply drove across the stubble. In the blistering heat, top day time temperature usually about 35ºC, it appeared rather as a cross between Poitou and a flattened Salisbury Plain but the clouds of dust that followed each and every vehicle were rather frightening.

After two days, that is warm up events plus the first day of World Cup (F1B and F1C) and before the final FlA day there was an organised meal in a large and very local hostelry in Hakeborn (walking distance) at which prizes for all the contests flown up until then were given out. Proceedings were a little confusing for anyone not fluent in German but the price of the food seemed very reasonable. There was much hilarity and it was well attended. That night an enormous thunderstorm cleared the air and laid the dust at least for the first few hours of the Glider day. However, as previously, temperatures soon moved into the middle 30s and with none of the cloud cover that had built up on previous afternoons just blistering sun. Phew!

Flyoffs seemed to start too soon after the contest proper and suffered from timekeeper shortages. A gap would have allowed more preparation time and also cooler and less thermally conditions. Why are organisers always in such a rush at this stage? Hence the F1B and C flyoffs that your reporter helped time were flown for their first two rounds in a standing thermal which although spectacular proved very little. The third round was a much better test.

British participation in FAI centred solely on John Cuthbert - F1C World Cup leader - who despite an unlucky flight right in the middle of the contest, the same round that did for Aringer incidentally, came 6th and kept his challenge alive and Dave Hipperson in F1C-X. He, so comfortable with the British Open type rules of no rounds, no lines and no official time keepers maxed out and won the flyoff with the debut flight of his biggest yet T34. His first win in anything ever outside the UK!

British FAI enthusiasts who routinely treck off to Poitou each year would be well advised to think about this one. Only slightly further albeit in a different direction and timed to fall one week before the other German World Cup event at Zulpich. Autobahns in Germany are free and very direct, it would be easy to take in both comps. with little more time away than many of you spend doing the single French one and Zulpich really is civilised with a couple of attractive small German towns close by and usually much less dust.

A couple of final observations. It seems contradictory now what with World Cup level FAI flying being such big business (I watched and listened in on a few frightenly large financial deals going down during the days I was within earshot of the main movers and the cars they drive!) - that there should ever be a shortage of timekeepers. My suggestion is simply tax the dealers *hard* and fold the cash raised back into pay timekeepers *properly*. Its a tough job particularly glider. Finally one of many humours moments. When your reporter was walking back proudly from his fifth F1C-X max an interested German bystander came up and pointed at the model exclaiming “Ah! Dixielander!” I only wished at that moment George Fuller could have seen my face he would have rolled about. I hadn’t then the nerve to explain the derivations of my models actual name as I wanted to stay in one piece until at least the flyoff!

BMFA FREE FLIGHT FORUM 2001

The eighteenth BMFA Free Flight Forum will be held in the Jaguar Room at the Holiday Inn Hotel (previously known as the Forte Posthouse Hotel), Coventry on Nov. 25th starting at 10 a.m. This is the day after the BMFA AGM and prize-giving at the same venue. Its an ideal opportunity to attend the AGM, enjoy the dinner, meet other flyers in a relaxed atmosphere and then follow it up the next day by catching up on the developments, techniques and aerodynamics of free-flight at what has become one of the annual fixtures of British model flying.

Among the topics to be covered will be Free Flight Diversity Strength or Weakness, Developments in Slow Open Power, Electric Flight, Catapult Hand-Launched Gliders, Propeller Hinge Geometry for flat folding, Flying the new rule F1Ds Coupe D'Hiver Variable Pitch Propellers, F1B topics, and several others

Lunch will be available and finish will be at around 4p.m. The cost for the session will be just £8, with proceeds going towards the expenses of the teams that represent us at World and European F/F Championships. Pre-booking will ensure that you get a seat, so send your cheque, payable to BMFA F/F Team Support Fund, to the BMFA at Chacksfield House, 31, St. Andrews Road, Leicester LE2 8RE, marking the envelope F/F Forum.

CARDINGTON INDOOR TEAM TRIALS

The Team Trials to select an indoor team for the 2002 Slanic World Champs were flown at Cardington, Bedford on two dates. There were four flights each day, the best two flights added gave the final score.

We did not have "crackerjack" weather on either date, but it was tolerable. Most of the best flights, came from the first date at our National Champs on August 27th.

		Best 2 scores		Total	
1	R Green	31.40	34.06	65.46	
2	R Bailey	32.35	32.30	65.05	
3	B Hunt	34.00	30.33	64.33	*
4	D Richards	32.17	31.49	64.06	
5	J Tipper	30.31	32.38	63.09	
6	G Lefever	31.01	29.34	60.35	
7	N Aikman	25.37	22.21	47.58	
8	L Barr	6.36	25.28	32.04	

* Bernie Hunt declined his Salt Mine punishment option, so Derek Richards is our 3rd team member with John Tipper first reserve.

With a vacuum as to the future in either hangar 1 or 2, I cannot say if we have any future for next year and beyond. I look back on 30 years of promoting and organising flying at Cardington with enormous pride and gratitude for the great times we had and that my "mistress"- Indoor Duration has given me and Britain.

The grand World Champs we held there and abroad have seen our teams winning gold, silver and bronze team places, a silver medal for Dave Pymm, and bronze for John Tipper and Laurie Barr, in the individual champs

So a valadictory list, of all those who have represented our country since 1971: Bernard Aslett, Bob Bailey, John Blount, Laurie Barr, Ron Green, Bernard Hunt, Brian Kenny, Derl Morley, Dave Pymm, Reg Parham, Derek Richards,Martin Shepard, John Tipper. (With apologies if my memory has missed someone!)

I will try my best, to keep my ears open for any news, about the future use of these grand old buildings, but it may be that this is our last ever year in the sheds that Sir Barnes Wallis put up for our use (Oh, and the airships!).

Without Cardington, our indoor expertise would have never reached the level at which it now is. So we all bless the memory, and hope we can find another home somewhere, but who is building high ceiling, large floor space buildings, that are draught proof, and let us use them for not much money, and can allow us to fix up a date, two years in advance, so we can host future world champs?

Mournfully yours, Laurie Barr.

To amplify the situation at Cardington Laurie provided the following further details:

Hanger 1 is wrecked, and unless the present Airship company does it up (£5 million pounds?) it is so dangerous, that only a company registered outside the UK can avoid the health and safety regulations that stop everyone else from even entering! It has so many holes it is like a colander.

Hanger 2 is up for sale and is closing down at the end of this September. In any case, with the main doors set to leave an 8" gap, only days when the wind is in the North is it at all flyable. A day when you fly without steering of major proportions, is unheard of.

When I learn who if anyone has bought it (complete with all those burnt out buildings inside!) I will try to negotiate something, but commercial companies do not usually make good hosts to model toy flyers.

CORRESPONDENCE

Dave Hipperson:

A quick glance through the field assured me that few if any apart from possibly Ossi Kilpelainen had built all their model and most had built virtually none of it. The reason I could tell this is that many were identical even though different elaborate colour schemes tried hard to hide the fact and most were from recognisable stables. Why don't those that buy Andriukov models change the fin shape? Many were his numerous, others looked suspiciously Vivchar and I know Silz flies Gorban airframes. The flyoff field represented thousands upon thousand of pounds of business transaction sometime in the not too distant past.

In contrast the complicated contests although very well run depend to a large degree on voluntary help certainly in the timekeeper department. The FAI system excellent though it is in allowing anyone the chance to fly no matter how little back up support he can bring with him creates huge demands on the host country's manpower pool. We visited the flight line towards the end of F1B/F1C day to discover that the organisation was having a problem staffing the 24 poles necessary to run a flyoff involving four F1Cs and twenty F1Bs. Had we not had a pair of binoculars and watches with us they may still be out there waiting for something to happen. So it was that I became involved in timing for a serious F1B flyoff.

All very exciting but the fact remains that expensive equipment and many hours of time, even if its only travelling to the comps that these guys spend their time doing apart from earning enough to buy into this level of competition, are being laid on the line here and there was a moment when they thought they were not going to be able to go ahead because of a lack of timekeepers of *any* calibre! Then the final outcome - good test for the models though it was - can depend on your getting a

timekeeper like me or one that has got bored, and wants to go home after an already tiring day. Can't blame them either - they do it for virtually nothing. My suggestion would be to instigate a very punitive taxation on the main manufactures and suppliers preferably in relation to their current profit levels and plough the money so earned straight back into a general World Cup fund which can be distributed to organisers so they can professionalise the running of these events by paying the timekeepers a fair bit to start with. (Particularly glider timekeepers as that's very difficult nowadays what with all the antics contestant get up with their models before they actually release them often at some distance from the timekeeper.) This would doubtless encourage people to time and furthermore might make them appreciate how important a job it is and learn the rules and concentrate properly. After all a number of outfits now are making enormous sums of money out of Free flight FAI. I am reliably informed that neither Europe nor America are the major market either. Box loads of airframes are being shipped out to the Japanese at the moment. Knowing their enthusiasm for technical gismos particularly of a sporting persuasion I think this is entirely possible. I read somewhere that nearly every Jap over the age of 18 has a set of golf clubs but there are only enough venues in Japan for something like one thousandth of this number ever to see a course let alone play on one! Imagine the profits that await the astute Free Right FAI model spec. manufacturers if they follow that lucrative path. Why shouldn't some of it come back to fund the contests and the FAI that made it all possible in the first place?

INTERNATIONAL COMPETITION NEWS

Lincoln Vincent reports that there will be four World Cup events flown in New Zealand in Australia over a three week period in March-April, 2002.

These will be, at Omarama, New Zealand, the Kotuku Cup from March 17 to 20 and the Omarama Cup from March 21 to 25.

They will be followed at Narrandera, Australia, by the AFFS event from March 29 to April 1 and the Southern Cross Cup from April 2-4.

Information on the NZ events will be available from the NZMAA web site:

http://members.tripod.com/~NZMAA

a private site:

http://mysite.xtra.co.nz/~FreeFlightNZ/page2.html

or by email to lvincent@zfree.co.nz

At this stage information from Australia is available from www.ozemail.com.au/~barrylee

UK COMPETITION NEWS

SAM 1066 King Harold Cup and Hastings Trophy for F1G and vintage CdH will be held at Middle Wallop on December 2. Start 10am. Contact David Beales 0208 858 2714.

COUPE INTERNATIONAL. As a correction to last month's item about the event planned by Dennis Davitt at Church Fenton on December 29, the events should have read 80g, 100g and vintage Coupes.

LOST HILLS WORLD CHAMPIONSHIPS

The following message was issued by Bob Underwood on behalf of the AMA President in mid-September:

At the request of Dave Brown, AMA President, this message is being posted concerning the F1 World Championships to be held at Lost Hills, California in October.

After weighing many factors, AMA and the free flight organisers wish to announce that plans to hold that event as scheduled continue at this time.

As has been true for the now concluded F3C World Championships in Muncie, every effort will be made to provide a safe environment for the competition.

While airline operations have been partially restored, we cannot be certain when complete and normal schedules will occur. It should be noted that heightened security at all airports may result in difficulties transporting equipment. Further information will be forwarded as insights are gained through our assisting the departure of the F3C teams this weekend.

The Academy wishes to thank those individuals and countries who have expressed their sympathy concerning the events of this past week. May we, as aeromodellers, look forward to coming together in friendly competition and the spirit of goodwill.

NFFS TEN MODELS OF THE YEAR

Each year the National Free Flight Society honours a group of noteworthy designs as part of the annual Symposium Report. Nominations are now requested for the 2002 awards. Typically these are for models of the modern era which exhibit unique design and outstanding performance as proven in competition. Occasionally, a special award is given for a unique component, tool or material which has greatly contributed to the advancement of an event or free flight as a whole. Nominations should be sent before February 1st 2002 and must include a one page description of the model, a resume of the modeller, a three-view and a photograph. Send to the chairman of the selection committee Mike Roberts at 2435 53rd SW, Seattle, WA 98116, USA.

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.

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	J Valo	FIN	130	BC-1	PZ-2	HL-3	SC-12	
4	P Findahl	SWE	127	SW-1	SH-1	HL-4	UP-6	
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		
17	O Stoev	UKR	81	SB-1	PZ-8	NC-18		
18	V Morgan	AUS	80	AC-1	SN-3			
19	P Mitchell	AUS	80	AC-2	SN-2			
20	P Summersby	AUS	80	SN-1	AC-3			
21	I Yablonovsky	UKR	79	NC-2	AN-5	EF-12	VB-7	
22	T Weimer	GER	76	PZ-4	BD-4	SC-7		
23	D Oldfield	GBR	73	VH-2	UP-8	MM-11		
24	J Abad	ESP	70	VH-1	HL-6			

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	Y Waltonen	FIN	121	CM-1	EF-2	UP-4	BC-4	
5	V Rosonoks	LAT	112	PZ-1	HL-3	EF-5	SW-6	
6	A Kutvonen	FIN	112	BC-1	UP-2	BD-9	EF-17	
7	S Stefanchuck	UKR	111	AN-1	EF-3	PZ-5	SW-5	
8	A Zeri	NED	110	PT-1	SN-3	AC-4	EF-9	
9	W Ghio	USA	103	MM-1	HC-3	HL-10		
10	P Ruyter	NED	101	HL-2	SH-3	MM-5		
11	H Meusburger	AUT	100	HL-1	SH-4	VJ-6	PT-15	
12	R Blackam	AUS	99	AC-2	SN-2	MM-11		
13	A Bukin	UKR	95	SW-1	VB-5	EF-7	HL-9	
14	R Peers	GBR	94	SH-2	HL-4	MM-6	PT-18	
15	M Woodhouse	GBR	89	UP-1	VH-4	EF-16	MM-23	
16	A Chik	UKR	88	NC-1	AN-6	PZ-12		
17	J Krasznai	HUN	86	PZ-2	NC-2	VJ-5		
18	S Tedeschi	FRA	85	CM-3	VH-3	PT-5	NC-5	
19	M Rolands	LTU	75	UP-3	BC-3	HL-15		
20	I Vivchar	UKR	73	BD-3	PT-9	SH-7	VB-9	
21	I Zilberg	GER	72	BD-4	PZ-7	NC-6	EF-8	
22	A Andriukov	USA	69	MM-2	HL-5			
23	E Shternlib (J)	ISR	65	SB-1	IS-12			
24	I Ben Itzhak	ISR	64	IS-1	MM-17			

F1C

1	J Cuthbert	GBR	152	UP-1	SH-1	CM-1	VH-1	
2	E Verbitsky	UKR	142	PZ-1	MM-2	AN-2	RN-3	
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	CP Wachtler	GER	98	BD-1	VS-3	PZ-12		
9	M Roman	POL	97	VS-1	PZ-5	BD-5		
10	S Screen	GBR	84	PT-2	SH-4	MM-13		
11	A Babenko	UKR	82	VB-1	PZ-4	AN-1		
12	K Kuukka	FIN	81	BC-1	HL-3			
13	G Aringer	AUT	80	HL-2	EF-5	PZ-10	BD-7	
14	V Alexandrov	UKR	77	PZ-2	VB-3	AN-8		
15	O Maczko	HUN	77	NC-1	VJ-4			
16	R Torgomadze	RUS	73	RN-1	VB-8			
17	E Keck	USA	70	HC-1	MM-5			
18	T Niiranen	FIN	70	SC-2	BC-3	UP-3		
19	J Roots	EST	65	BC-2	HL-4			
20	M Nogga	GER	63	BD-2	VS-5			

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

Contests still to count for 2001
Soko Cup BIH, Canada Cup CAN, Sierra Cup USA, KRKA Cup SLO, Montenegro Cup YUG, Euro-Fly SUI.

F1E

1	D Petcu	ROM	137	RA-1	MK-1	FR-3	LP-4	
2	Z Vojtok	CZE	102	TC-1	RB-4	KA-5	LP-8	
3	F Doupovec	CZE	95	RA-2	KA-3	LP-7	RB-10	
4	P Nosko	SVK	93	TC-2	MK-4	RB-5	LP-9	
5	M Valastiak	SVK	87	RA-3	MK-3	LP-6	RB-20	
6	F Mang	AUT	87	FR-1	LP-5	RA-14	KA-13	
7	M Popescu	ROM	81	LP-2	MK-6	RA-9		
8	I Treger	SVK	76	MK-2	RB-3	RA-17		
9	M Noskova (J)	SVK	75	LP-1	FR-10	RA-19		
10	J Valastiak	SVK	70	LP-3	KA-4	MK-15	FR-4	

Contests included in the F1E results:

RA	Rana 27 Apr CZE	RB	Rana 28 Apr CZE,
TC	Turda Cup ROM	NA	Napoca Cup ROM
FR	Freundschaftscup AUT	KA	Kolibri-Pokal AUT
MK	Mikulas Cup HUN	LP	Liptov Cup SVK

Contests still to count for 2001
Saint Florian's POL, Governors Cup POL, Oberkotzau GER