

FREE FLIGHT news

CONTENTS

David Greaves	2	Southern Coupe League 2016	8
CIAM FF Proposals	3	News from BMFA FF Tech Committee	9
FAI Sporting Code 2016	5	BMFA Free Flight Championships	9
Free Flight Forum	5	CIAM Calendar 2016	9
Hanukkah Open, Orim, Israel, Dec 11-12	6	UK Competition News	9
FAI Free Flight World Cup	6	Noticeboard	9
FAI Free Flight Ranking	8	FFn Index 2015	10
Le Grand Coupe De Birmingham, North Luffenham, Dec 6	8		

FFn DIARY

January 30 Ceminac, Croatia	F1N Indoor Open Ceminac. F1N. Contact: Antun Sikic, tel: +385 31 208 262, email: asikic@gmail.com web: www.ak-osijek.hr	March 12 Gjovik, Norway	Holiday on Ice. F1A F1B F1C F1Q. World Cup event. Contact: Tor Bortne, Jernbanev 28, 2840 Reinsvoll, Norway, tel: +47 920 95 329, email: tobortne@bnet.no web: www.friflugtvegar.no
January 31 Husbands Bosworth	BMFA – The future of free flight. See FFn 1512. Contact Mike Woodhouse, MichaelWoodhouse1942@gmail.com or 01603 457754	March 17 Säkylä Pyhäjärvi, Finland	Swedish Moose Cup. F1A F1B F1C F1Q. World Cup event. Contact: Per Findahl, Bergvägen 8, 738 33 Norberg, Sweden, tel: +46 223 22 957, email: per.findahl@gmail.com web: http://norbergssf.se/swedishcup
February 6-8 Lost Hills, California, USA	Kiwi Cup of New Zealand. F1A F1B F1C F1E F1P F1Q. World Cup event. Contact: Roger Morrell, tel: +1 310 483 8776, email: r_morrell@yahoo.com	March 19-20 Säkylä, Pori, Finland	Bear Cup. F1A F1B F1C F1P F1Q. World Cup event. Contact: Kim Henriksson, Ymmerstanmäki 9B, 02750 Espoo, Finland, tel: +358 44 7688 370, email: kim.henriksson@vahanen.com web: www.lennokkipojat.fi
February 10 Lost Hills, California, USA	North American Cup. F1A F1B F1C F1Q. World Cup event. Contact: Tony Mathews, tel: +1 905 840 2268, email: tmathews180@gmail.com	March 25 (Good Friday) North Luffenham	BMFA Northern Gala. C/G (CMA), C/R (Caton), B/P (Hamley); [Club Champs], C/E, SLOP (Falcons), F1H, P30, BMFA 1/2A, Mini-Vintage, HLG-CLG. Contact: G Warburton 0113 2852947
February 11-15 Lost Hills, California, USA	Bob White Max Men International. F1A F1B F1C F1E F1Q. World Cup event. Contact: William Booth, tel: +1 760 889 3201, fax: +1 760 434 8593, email: booth@boothsuarez.com	April 8-10 Narrandera NSW, Australia	Dave Anderson Memorial World Cup. F1A F1B F1C. World Cup event. Contact: Phil Mitchell, PO Box 44, Terrigal 2260, Australia, tel: +61 41 94 41 4653, email: filnoels@bigpond.net.au
February 14 Area Venues	BMFA 1st Area. F1A (SMAE), F1G (Plugge), C/P (White), E36 (Plugge), Mini Vintage (Plugge). Contact: Area Comp Secs.	April 9-10 Salonta, Romania	Harghita Cup. F1A F1B F1C F1H F1P F1Q. World Cup event. Contact: Kiss Istvan, tel: 0745 161435 / 073523 1169, emails: ktamara@net.ro or tanulokhaza@hrline.ro www.faif1abc.com
February 21 Nova Pazova, Serbia	7th Koplas Pro Kup. F1N. Contact: Martin Grubic, tel: 022/325 232, email: martin.grubic@yahoo.com	April 10 Area Venues	BMFA 3rd Area. Vint' G (Plugge), C/R (Gamage), F1C (Halfax/Plugge), F1Q, HLG-CLG (Plugge). Contact: Area Comp Secs.
March 5-6 Vettnik, Czech Rep.	5th: Winter Cup I, 6th: Winter Cup II. F1E. World Cup events. Contact: Vojtech Zima, Smetanovo nab. 1840, 75301 Hranice, Czech Rep., tel: +420 604 58 9792, email: voziteam@seznam.cz web: http://modelarihranice.ic.cz		
March 6 Area Venues	BMFA 2nd Area. F1H, P30 (Plugge), F1J (Plugge), BMFA 1/2A, CE (Plugge), HLG-CLG. Contact: Area Comp Secs.		

7 Ashley Road, Farnborough, Hants, England GU14 7EZ ffn@btinternet.com

Web site address: www.freeflightnews.org.uk

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

DAVID GREAVES

1942 to 2015

From Bristol and West MAC

David, or Dave as he was more usually called by his many modelling friends, all of whom would have considered his friendship to be a real privilege. He travelled widely in pursuit of his passion for FF contest flying, both in Britain and abroad and acquired lasting friendships throughout the world.

He was renowned for his wonderful sense of humour. He had a seemingly never ending supply of jokes and never missed an opportunity try out a new one. He was also a great raconteur, usually with tales of a humorous nature, some a little risqué but never crude. and was also renowned for his many witty comments on life in general. His semi-private joke was that all his models were embellished by the name of French girls; what wasn't immediately apparent was that they were names of ladies with a bit of a reputation!

It might be said that Dave underwent two "apprenticeships". One to prepare for his professional career as an artistic and talented craftsman, a Stonemason, the other to prepare for his main leisure interest as an artistic and talented craftsman, an Aero modeller. The two appeared to complement each other perfectly.

His Aeromodelling apprenticeship began as a schoolboy in short trousers when he was introduced to the Leamington Spa club in the early fifties by a relation, the renowned Rubber flyer, Eric Barnacle. Despite his tender years he quickly established a reputation as a flyer of no mean ability and he regularly appeared in contest reports in the modelling press. Amongst his most notable achievements in this era were being selected at 16 years of age as a proxy flier for the New Zealand team for the 1958 Wakefield Cup, and winning the Aeromodeller Golden Wings glider trophy for juniors.

He later became a member of the Birmingham Club for several years where he enjoyed the company and experience of many of the great names in Aeromodelling. It was during this period that he achieved a 50 minute plus fly off flight in an Area De-centralised glider contest, and sadly didn't win!



Proxy flying for NZ

When he moved to Cirencester after acquiring a Monumental Masonry business he was welcomed with open arms into Bristol and West, where he has been a "leading light" ever since. He was an inspiring club-man and his influence and contribution no doubt led to a great upturn in the club's results on the flying field. In particular in the Plugge Trophy where

the club have enjoyed great success over the years since Dave's arrival.

Dave's models were always of his own design, beautifully constructed and beautiful of form. He was truly an artist and a craftsman. His skills and artistry as a stone mason were much in demand by the aero modelling fraternity for his unique trophies. His talent in this field originally came to light when he generously provided stone trophies for the Devon Rally, which he helped to organise and run for a number of years. These were much sought after and led to a request to provide similar trophies for the Stonehenge event over a number of years. This was no light undertaking, requiring the production of a large number of trophies each year. He used to anguish over the challenge of creating and producing a different design every year but he always came up with yet another impressive creation. A lot of his success on the flying field was down to his meticulous approach to trimming which was almost a passion to him. He took every opportunity possible to go out for a trimming session, and almost seemed to fret if he couldn't get out regularly for any reason.



In sunflowers in France

Dave enjoyed many visits to the Continent, competing in events such as the Pierre Trebod and regularly at Poitou, a particular favourite. He was also very proud to achieve a place on the British Wakefield team to compete in the European Championships.

The last big continental event attended by David and Liz was the 2013 World Championships in France at Poitou. Dave flew in Coupe and F1B in the preceding World Cup events, and was a supporter for the World Championships. Dave and Liz really enjoyed their stay at La Grand Chateau with a large group of fellow aero modellers.

Dave also frequently acted as a very respected CD, both at Area and National level. Of these he will possibly best remembered for his organising and running of the Southern Gala over a large number of years from the early 1980's to the present day.

Away from modelling, and in his younger days, Dave also had a great enthusiasm, and ability, for Table Tennis. He devoted a lot of time to organising this sport for the benefit of a local youth group

Dave was a Master Mason, Master Model Builder, Master Flier and a Master Character. Irrepressible and irreplaceable. He will be sorely missed by all who knew him and especially by his family and close friends to whom we offer our sincerest condolences.



At World Champs 2013

An example of Dave's stonemason expertise applied for aeromodelling.

This is the Swedish Cup, the trophy for the individual World Champion in F1A.

In 1993 all the spaces for name shad been filled and Dave fitted a new marble base layer.

By 2009 that layer had also been filled and so Dave added another layer, in the exact matching marble and style.



CIAM FF PROPOSALS

The following are the proposals which I understand have been accepted for the CIAM Plenary Meeting agenda when it is published. Most of these have been submitted by the CIAM FF Subcommittee (FFSC). Bold text indicates new wording.

FFSC: Definition of an unsuccessful attempt

All classes – clarify the attempt rule for a detached part. Two versions, one for towline gliders, another for all other classes

F1A Modify item 3.1.5.(c):

3.1.5.c) **It is apparent to the timekeepers that** a part of the model becomes detached during the launch **by the helper, while the model is being towed,** or during the **official** flight time

Same change also to F1H at 3.H.5.d

F1B Modify 3.2.5 (a):

3.2.5.a) **It is apparent to the timekeepers that** a part of the model becomes detached during the launch or during the **official** flight time

Same change also to F1C 3.3.5.b, F1E 3.5.5.a, F1P 3.6.5.c, F1G 3.G.5.b, F1J 3.J.5.c, F1K 3.K.5.b, F1Q 3.Q.5.b

Reasons

This clarifies the need for the timekeepers to see the part that becomes detached and the fact that this applies up to the end of the official flight time.

FFSC F1A 3.1.7.Duration of Flights

Modify the text of the first paragraph :

The maximum duration to be taken for the official flights in world and continental championships is four minutes for the first round and, if conditions allow, for the last round and three minutes for the other rounds. In other international events a maximum of three minutes will be used for all rounds unless different durations (not exceeding **five** minutes) have been announced in advance in the contest bulletin for specific rounds.

Change 3.2.7 and 3.3.7 to read “See 3.1.7”

Reasons

A proposal to change the maximum in the first round of F1A championships was presented to Plenary meeting 2015 which it was intended would make 3.1.7 for F1A identical to the existing rules 3.2.7 for F1B and 3.3.7 for F1C. The proposal was passed by the Plenary meeting but when being implemented in the 2016 Sporting Code it was realised that there was one word different in the proposal compared to the existing text in 3.2.7 and 3.3.7. The rule 3.1.7 as presented to Plenary 2015 has been implemented in the 2016 Sporting Code but without the cross-reference from 3.2.7 and 3.3.7. This proposal is presented to correct this difference – it applies only to open internationals and allows flight time increase to five minutes instead of four minutes.

FFSC F1A 3.1.8 Classification (applies to F1B, F1C)

Add new item (9) as a clarification to 3.1.8.f (the group flyoff option)

9) **Competitors proceeding from group flyoffs to the later flyoffs will be classified only by times achieved in the later flyoffs after the group stages. The times in group stages do not count in their classification.**

Reasons

The groups flyoff was approved by CIAM for application from January 2016. In advance of that the system has been used in two World Cup events during 2015. One of these indicated a confusion about the scores to be used for classification. The additional item is an explicit clarification of intent of the original proposal, where it was stated in the reasons that “With another flyoff guaranteed by (7) this ordering will not determine the winners but just the lower places.” However, the proposal did not include explicit words to mandate this effect.

Netherlands - F1C 3.3.2. Characteristics

Change fuel definition:

Fuel to a standard formula for glow plug and spark ignition motors will be supplied by the organisers, and must be used for every official flight. The composition shall be as follows: 80% methanol, 20% oil. **Oil can be castor oil or synthetic oil. There is a free choice for the competitor.**

Reasons

Lots of competitors spread over the continents are using Synthetic oil. There are lots of well-known brands.

An extra indication on the (preliminary) entry form for F1C informs the organiser about the competitor needs.

If we remember the enormous number of crashes on the WC in France 2013 mostly due to polluted Castor oil, we have to categorise this clarification as a safety one.

Germany F1Q 3.Q.2

Change weight limit for energy calculation:

The motor run time will be determined by a maximum energy amount. In addition, motor runs over 40 seconds are regarded as overruns. The energy budget of each model is 4 Joules per gram of the total weight. For energy calculations, weight exceeding 550 grams is to be ignored. Energy limitation will be by an energy limiter or by a motor run limit related to measured power.

Reasons

After the point of establishing the maximum weight of 550 gram to energy allocation into the rules, many sportsmen have invested a lot of time to build or money to buy new models to meet this requirement. Since the implementation of this requirement only a short time past and these models are in best condition.

If the new limit of weight will be valid permanently, all these model airframes and the big effort to make these ready to flight are obsolete. To reach a target with a rule change (in this case performance reduction), it should be carefully selected the best way and not a multiple rule revision at the same time. This will lead to the situation, that a number of sportsmen will no longer follow the rapidly rule changes and will quit fly F1Q. It's not a good impulse for further increasing of participation in this class.

This new amount of weight limitation doesn't have a significant influence of the performance reduction which should be achieved with the rule change last year. It will only give a disadvantage for the larger models in opposite to the smaller ones.

Due to the 2015 rules with reduced energy and extended motor run time there is a trend to slow, long time climb models with a low wing load. Thus the safety argument to reduce the weight and to minimize the energy and the risk of damages in case of a crash is no longer a very important one. The high speed climbing models were a requirement of the rule with battery weight and motor time limitation. These climb figure will have a disadvantage under the new rules, so the high speed; straight climbing models will lose importance.

To play with energy amount and motor run time is a good way to find an acceptable level of performance. It's to avoid make imprudent changes at the airframes of the models in the future. To change some technical components or setup parameters is much easier, although in the past there was also some turbulences (e.g. in the case of detailed limiter specifications).

The last season has shown that slower models become advantages in the competition. This will lead in the future to a process of replacing the less competitive heavier models by model designs which have better adapted characteristics for the new rule without the need of an extra rule change. By avoiding making old models obsolete, rule changes will be more easily accepted by the competitors.

FFSC: F1 Annex 1 World Cup - 4.Points Allocation

Multiply points awarded for places by 10 and simplify bonus points to one per person beaten by replacing first part of (4) by:

Points are allocated to competitors at each contest according to their placing in the results and the number of competitors beaten as given in the following table and the following items:

Placing	1	2	3	4	5	6	7	8
Points	500	400	300	250	200	190	180	170
Placing	9	10	11	12	13	14	15	16
Points	160	150	140	130	120	110	100	90
Placing	17	18	19	20	21	22	23	24
Points	80	70	60	50	40	30	20	10

Each competitor awarded placing points is eligible for one bonus point for each competitor they have beaten in the competition. The number of people beaten by someone in place P is (N-P) with N the number of competitors defined in b) below.

Reasons

The current system awards bonus points for every 5 or 10 people beaten so there is a jump of one bonus points as each threshold is crossed. The proposed system introduces a smooth increase of bonus points for every single person beaten. To maintain the relative magnitude of bonus points and place scoring points without resorting to decimal points, the scoring points in the table are the current values multiplied by 10. The smooth progression of bonus points will reduce the advantage of adding a specific number of nominal competitors to an event to increase the winner's bonus points.

FFSC: F1 Annex 1 World Cup - 4.Points Allocation

Change para (b) to:

- b) Points are awarded only to competitors in the top half of the results list (if N is the number of competitors who completed **a flight in the first round of the competition**, then the points from the above table are awarded only for places 1 to N/2, rounding up when necessary in calculating the N/2 place).

Reasons

This ensures that the number of competitors is known after the first round, fixing the number who can be awarded World Cup points and the maximum number of bonus points available, with no possibility of change by introducing late entries.

FFSC: F1 Annex 2

Update organisers guides

FFSC Volume ABR B.17.6 Identification Marks

Remove the free flight specific words from the end of paragraph B.17.6.b which require the organisers to mark each part of free flight models.

Reasons

There is currently confusion between the requirement in B.17.6.b to mark every part of a free flight model and the later rule in B.17.13.a that the indication of a free flight model having been processed must be by a single stamp or mark by the FAI sticker. B.17.13 had introduced simplifications of processing free flight models to reduce the time spent in processing. The model identification identifies the model processed without the need for a lot of stickers or stamps on every component. While there might be some slight risk of the rule being avoided by a competitor having a number of components with the same identification number, it is considered that this unlikely to be a significant risk to set against the overall simplification of avoiding lots of stamps or stickers which often come off or are washed away during a competition.

FFSC All Technical volumes.

Change the numbering system in the technical volumes to replace the leading numbers of the current numeric system N.x.x by the class abbreviation.

Reasons

The numbers used in the Sporting Code originally related to its position as part numbers of the single book which contained the Sporting Code. Since the Code now appears only as separate volumes it is redundant to continue the use of the numbering system starting with 3 and higher for specific classes.

Instead it is proposed that all paragraphs in volume F1 start with "F1", those in volume F2 start with "F2", etc. This serves to identify the volume within the current format of the Sporting Code. Furthermore by adding the class letter, the specification for each class can be considered alone with completely self-explanatory evidence of the class to which the rules apply. Any cross-references to rules (for example from Annexes) are also made more comprehensible. You do not need to make the mental conversions such as "3.4 applies to F1D" or "5.2 applies to F3D" since it is obvious which class a rule covers. When rule changes are being considered there is also greater clarity in knowing which class is affected by a specific paragraph.

To give some examples:

In volume F1 Free Flight paragraph 3.4.7 in the F1D rules becomes F1D.7.

In Volume F2 Control Line paragraph 4.3.6 in the F2C rules becomes F2C.6.

In Volume F5 Electric paragraph 5.5.4.7 in the F5B rules becomes F5B.7

In Volume F4 Scale paragraph 6.3.4 in the F4C rules becomes F4C.6

Some technical volumes start with a general section applicable to all classes within the volume, this would be numbered with the basic volume letters, e.g. F4. Currently the different technical volumes use a variety of schemes to number the annexes, these can be transferred by the inclusion of the volume indicator to the number.

FAI SPORTING CODE 2016

The volumes of the 2016 Edition of the Sporting Code Section 4 are now published on the FAI website.

These documents can be found at: <http://www.fai.org/ciam-documents> (then scroll down to find the heading "Sporting Code")

For the full rules governing free flight you will need the technical Volume F1 and the general rules Volume ABR.

Amongst other changes the new Code introduces F1S. The rules are reproduced here:

Class F1S Small Electric Power Model Aircraft "E36"

3.S.1 Definition

Model aircraft which is powered by an electric motor(s) and in which lift is generated by aerodynamic forces acting on surfaces that remain fixed in flight except to dethermalise.

3.S.2 Characteristic

Nickel Cadmium (NiCad), Nickel Metal Hydrate (NiMH) and Lithium (Li) batteries can be used. Only 2 cell Lithium batteries or up to 6 cell Nickel cells can be used. Other battery related specifications in 3.Q.2 apply.

Rule B.3.1 of section 4b does not apply to the class. (Builder of the model).

Maximum duration of motor run	10 seconds during the regular flights.
Minimum weight	120 g
Maximum wing span	91.44 cm (36 inches)

3.S.3 Number of flights

- Each competitor is entitled to five official flights.
- See 3.Q.3.b.

3.S.4 Definition of an official flight

See 3.Q.4.

3.S.5 Definition of an unsuccessful attempt

See 3.Q.5.

3.S.6 Repeat of an attempt

See 3.Q.6

3.S.7 Duration of flights

The maximum duration shall be two minutes.

3.S.8 Classification

- See 3.Q.8.a
- In order to decide the individual placings when there is a tie, additional flights shall be made after the last flight of the event has been completed. The motor run will not exceed 5 seconds for all the deciding flights. The maximum time of flight for the first deciding flight shall be two minutes; increased by one minute for each subsequent flight.
- See 3.Q.8.c
- See 3.Q.8.d

3.S.9 Timing

- See Section 4b, para B.13.
- The timing of flights is limited to the durations specified in S.7 and S.8. The total flight time is taken from the launch of the model to the end of the flight.
- The motor run must be timed either in flight or statically before the flight with quartz controlled electronic stopwatches with digital readout, recording to at least 1/100 of a second, reduced to the nearest 1/10th of a second below. The battery can be replaced after a preflight verification.

3.S.10 Number of helpers

See 3.Q.10

3.S.11 Launching

See 3.Q.11

FREE FLIGHT FORUM

Report by Ian Kaynes

The 2015 Forum was held at Hinkley Island Hotel on November 22.

The day started with Mark Gibbs talking about weather forecasts. He explained the advances that had taken place in deterministic models, with grid size reducing from 200km 30 years ago to the current 17km global and 1.5km over the UK. Comparisons had shown that the Met Office model gave better results than the others which are often accessed by the various weather web sites.

Andy Sephton then described basic propeller theory, actually discussing the effect of lift, drag and forward and rotational speed.

Andy then continued with a talk about indoor scale gliders. Launch methods considered included bungee, winch, or launching from a balcony. Normal towline was dismissed as too difficult to be running backwards. By contrast, an American indoor glider category does use towline.

Mark Gibbs then returned to talk about juniors in free flight. Specific attention was focussed on his experience with his son Joe flying in the 2015 Junior Euro Champs in Romania. A lack of practice and experience was addressed as far as possible in two practice days in Romania, the competition was enjoyed, a new model has been ordered, and planning for Macedonia 2016.

The morning finished with Mick Lester on carbon fibre. He explained how price related to the types of carbon and the importance of tensile strength and modulus. Intermediate modulus is the best compromise for modelling use, while high modulus is more expensive and more brittle.

Peter Brown described his method and equipment for making and testing rubber motors. Most notable was his automated system for testing rubber following a predetermined computer-controlled extension process, then after a holding period releasing the extension and immediately plotting force against extension and evaluating the energy storage.

Alan Brocklehurst talked about his computations on aerofoils for Coupes. One conclusion from comparing a number of codes was that XFOIL (as also used within Profili) can overestimate CM max. This is subject to the doubts about value to use for Ncrit in XFOIL.

Phil Ball gave the details of his method for moulding carbon props for rubber models, which gives a stiff 18g prop for open rubber.

Alan Brocklehurst returned for the closing talk of the day about Low Drag Aerofoils. He described the characteristics of typical LDA section and explained that LDA tend to perform better at higher glide speeds. He suggested that this could be taken further by flying fats into wind after a max to reduce retrieval distance and keep models within the field. Discussion showed doubts about how much difference this might make.

HANUKKAH OPEN, ORIM, ISRAEL, Dec 11-12

F1A 45 flew

1	M Kosonozhkin	RUS	930	+300	+420	+533
2	S Limor	ISR	930	+300	+420	+358
3	T Barkaei (J)	ISR	930	+300	+420	+261
4	T Roizin (J)	ISR	930	+300	+368	
5	K Cohen	ISR	930	+300	+308	
6	E Galor	ISR	930	+300	+288	
7	M Moskovich	ISR	930	+300	+261	
8	E Gerber	ISR	930	+300	+255	
9	M Mahler	ISR	930	+300	+182	
10	Y Vaknin	ISR	930	+223		

F1A-Junior 15 flew 6 full scores

1	T Barkaei	ISR	930	+300	+420	+261
2	T Rozin	ISR	930	+300	+368	
3	O Shechter	ISR	930	+148		

F1B 23 flew 14 full scores

1	O Shabat	ISR	960	+300	+420
2	G Mark	ISR	960	+300	+413
3	T Useynov	RUS	960	+300	+342
4	A Rybchenkov	RUS	960	+300	+316
5	G Mitzmacher	ISR	960	+300	+310
6	S Kuflik	ISR	960	+300	+295
7	T Faibish	ISR	960	+300	+277
8	I Vivchar	UKR	960	+300	+270
9	V Man	ISR	960	+300	+265
10	I Yurtseven	TUR	960	+300	+243

F1B-Junior 3 flew

1	B Bechor	ISR	914
2	Y Sarig	ISR	679

F1C 8 flew 6 full scores

1	V Aleksandrov	UKR	960	+300	+420	+600	+546
2	A Elyakim	ISR	960	+300	+420	+600	+484
3	Y Itzhakov	ISR	960	+300	+409		
4	S Nagari	ISR	960	+300	+247		

FAI FREE FLIGHT WORLD CUP

Final results for 2015 World Cup.

Key to contests and numbers flying in each class:

			A	AJ	B	BJ	C	Q	PJ
KW	Kiwi World Cup	USA	52	3	42	3	7	7	0
NA	North American	USA	54	3	47	1	14	5	1
MM	MaxMen	USA	57	3	49	1	18	6	1
PL	Philippe Lepage	FRA	0	0	14	1	0	0	0
SW	Swedish Moose	FIN	6	16	4	2	3	0	0
BC	Bear Cup	FIN	25	5	5	2	0	2	0
HL	Holiday on Ice	NOR	2	14	0	0	2	0	0
PI	Passover Open	ISR	33	10	11	0	5	0	0
HG	Harghita Cup	ROU	30	10	7	1	4	5	0
NL	Naloev Cup	RUS	62	12	55	12	29	0	7
AC	Australian FF Ch	AUS	6	0	8	0	4	0	0
JM	Jumbo Cup	SVK	14	22	2	3	0	0	0
SC	Southern Cross	AUS	7	0	9	0	3	0	0
KS	Slavonije i Baranje	CRO	14	19	3	7	4	0	0
SL	Salonta Cup	ROU	15	37	8	12	5	0	0
SZ	Szabó Miklós	ROU	14	27	5	9	5	0	0
LV	FF Latvia Cup	UKR	8	0	14	2	3	0	0
SF	Sofia Cup	BUL	31	7	12	3	5	0	1
SM	32nd Srem Cup	SRB	50	15	8	2	11	7	0
IC	Istanbul Cup	TUR	2	12	2	0	0	0	0
CB	Commonwealth	UKR	3	1	14	0	9	0	0
ZU	ZUBR Cup BLR	UKR	0	0	8	0	5	0	0
DZ	Djordje Zigic	SRB	10	8	1	5	0	0	0
KA	Kazakhstan Cup	KAZ	9	0	7	0	3	0	0
NK	Niksic Cup MNE	KAZ	9	0	7	0	3	0	0
HE	Herd Cup	HUN	29	4	10	1	11	4	0
SE	Swedish Cup	SWE	1	26	3	5	7	0	0
DK	Danish Cup	SWE	1	32	3	4	7	0	0
NO	Norwegian Cup	SWE	1	33	3	7	9	0	0
MS	51st Mostar Kup	BIH	5	12	1	5	3	0	0
TU	Tui Cup NZL	USA	1	0	1	1	1	2	0
CC	Centennial Cup	USA	1	0	1	1	0	2	0
AN	35th Antonov Cup	UKR	11	1	16	1	10	0	0
HC	Huron Cup	CAN	0	10	0	1	0	0	0
CN	Canada Cup	CAN	0	8	0	1	0	0	0
TV	Tuvshin's Cup	MGL	44	13	28	0	22	0	0
MG	Mongolia Cup	MGL	67	13	49	2	24	0	2
PT	Poitou	FRA	67	9	37	4	10	7	0
KZ	World Cup Kietrz	POL	61	12	30	5	11	10	1
IK	Izet Kurtalic	BIH	28	6	10	1	4	0	0
RB	Raciborz Cup	POL	59	13	28	5	10	10	1
EL	Elbrus Cup	RUS	30	5	27	3	17	0	6
EF	Eifelpokal	GER	65	4	44	1	7	2	0
HM	FF Holiday MGL	RUS	36	6	39	12	20	0	5
GM	Golden Autumn	RUS	26	5	31	6	20	0	4
CZ	Cro Cup Zapresic	CRO	27	5	13	2	6	1	0
MR	Mura Cup of SLO	CRO	31	6	12	2	6	1	0
CM	Cup of Moldova	RUS	30	5	23	4	18	0	5
VS	Victor Stamov Cup	UKR	14	1	19	1	14	0	0
AM	Almaty Cup	RUS	15	4	8	2	3	0	2
BU	Bulgaria cup	BUL	34	16	14	4	7	0	0
HO	Hogo cup	SVK	22	6	8	3	1	0	1
SH	Stonehenge Cup	GBR	24	2	19	3	6	3	0
EQ	Equinox Cup	GBR	18	2	16	2	4	3	0
PR	Prilep Cup	MKD	27	2	13	3	8	0	1
MC	Macedonia Cup	MKD	25	2	11	2	4	0	1
JI	Jihocesky Pohar	CZE	8	33	4	9	0	0	0
AL	Anatolian Cup	TUR	1	7	0	0	0	0	0
SR	Sierra Cup	USA	13	2	23	1	9	0	0
EU	Eurofly	SUI	64	4	71	3	23	9	2
HN	Hanukkah Open	ISR	45	15	23	3	8	0	0

1	Roland Koglot	SLO	220	KZ-1	RB-1	NA-1	KS-1	KW-2	HE-2	MC-2	SL-5	MG-10	MR-7	PR-8	JI-14
2	Per Findahl	SWE	214	SZ-1	SE-1	DK-1	HL-1	NA-2	PR-2	SL-3	KW-3	MC-2	TV-4	MM-6	SW-5
				BC-5	NO-2										
3	Jama Danier	CAN	201	MG-1	CN-1	HC-1	MM-2	TV-2	KW-6						
4	Mikhail Kosonozhkin	RUS	198	EF-1	NO-1	HN-1	DK-3	HL-3	EU-4	SL-6	NL-5	JI-17	SE-5		
5	Ivan Bezak	SVK	196	MM-1	KW-1	JM-1	HG-3	HE-3	HO-3	SL-7	NA-5	KS-5	JI-10	SM-12	KZ-18
6	Yuri Titov	RUS	193	GM-1	AM-1	NK-1	KA-2	NL-13	HM-7	EL-8	CM-10				
7	Rudolf Holzleitner	AUT	176	HE-1	MR-1	KZ-2	CZ-3	RB-4	DZ-12	JM-17	KS-4				
8	Maarten van Dijk	NED	164	PT-2	EF-2	SE-2	NO-4	EU-9	DK-4						
9	Kosma Huber	SWE	161	CZ-1	BC-1	SW-3	SZ-5	HL-6	MR-11						
10	Jes Nyhegn	DEN	153	PR-1	PT-3	KZ-3	MM-4	HL-4	NA-6	JM-9	MC-11	RB-23			
11	Matija Hrast	SLO	147	IK-1	HO-2	KS-3	SL-11	MR-15	SM-20						
12	Vasil Beschasnyi	UKR	139	VS-1	LV-1	EU-5	DK-14	KZ-19							
13	Luka Biteznik	SLO	138	HO-1	SL-4	MR-3	IK-5	SZ-13							
14	Emmanuel Ragot	FRA	137	TV-1	EF-3	PT-6	SL-9	HL-7	MG-16						
15	Anton Gorsky	RUS	135	DK-2	HM-2	NL-5	NO-5	CM-7	GM-7						
16	Frederic Aberlenc	FRA	132	SL-1	MG-4	EU-7	SZ-8	KW-11	NA-17	TV-18					
17	Lauri Malila	SUI	129		20	Radoje Blagojevic		SRB	123		23	Peter Brooks		USA	118
	Oleg Pshenichniy	UKR	126		21	Aviv Balassiano		ISR	121		24	Bertrand Pouzet		FRA	117
19	Bernard Trachez	FRA	124		22	Robert Lesko		CRO	118		25	John Carter		GBR	117

1	Alexander Andriukov	USA	214	MM-1	NA-1	NO-1	DK-1	HL-1	EU-4	KW-8	SR-10					
2	Bernd Silz	GER	200	JI-1	SZ-1	JM-1	DK-2	SE-3	SL-13	NO-10						
3	Adam Krawiec	POL	192	KZ-1	HE-1	HO-1	HG-2	SL-3	JI-3	JM-3	KS-8	RB-11	SZ-5			
4	Oleg Kulakovskiy	UKR	192	EU-1	CB-1	NO-2	LV-2	DK-8	VS-3	AN-5						
5	Anatoliy Rybchenkov	RUS	186	BU-1	SF-1	EL-2	CM-2	IC-2	AL-2	HN-4	GM-4					
6	Bojan Gostojic (J)	SRB	184	CZ-1	MS-1	KS-2	PR-2	SM-2	SL-4	DZ-4	MR-2					
7	Bror Eimar	SWE	184	SE-1	SW-1	HL-2	BC-2	NA-9	MM-12	NO-15	DK-15					
8	Dag Edvard Larsen	NOR	181	RB-1	KW-2	SL-2	SE-2	NO-6	HL-5	EU-12	KZ-11	JI-13	MM-24			
9	Timur Useynov	RUS	175	AM-1	KA-1	HM-2	HN-3	NK-3	MG-9	NL-18	GM-8	CM-5				
10	Evgeny Gorban	UKR	168	KW-1	JM-2	AN-2	LV-3	IC-3	NA-4	SZ-4	EU-6	JI-6	RB-6	PT-8	SL-9	KZ-13
				VS-9	CB-4	ZU-4										
11	Mickael Rigault	FRA	167	EQ-1	PL-1	EU-2	TV-8	PT-12	SL-15							
12	Igor Vivchar	UKR	166	AN-1	MM-2	ZU-2	CZ-3	MR-3	EF-8	MG-10	NA-10	HN-8	JI-15	VS-10		
13	Michael Seifert	GER	165	EF-1	NA-2	JI-2	MG-5	JM-8	SL-14							
14	Ismet Yurtseven	TUR	162	KS-1	AL-1	PR-3	SF-3	BU-4	IC-4	MC-4	CZ-5	HN-10	EF-14	MR-6		
15	Michael Woolner	GBR	151	SH-1	EU-3	KW-3	PL-3	SW-4	EF-5	NO-9	DK-10	EQ-8	NA-14	MG-15		
16	Viktor Rosonoks	LAT	148	SL-1	EF-2	SE-4	EU-7	SW-5	DK-14							
17	Svetozar Gostojic	SRB	142	20 Or Shabath			ISR	137	23 Evgeniy Gorban-jr			UKR	133			
18	Tony Mathews	CAN	140	21 Mihaly Varadi			HUN	136	24 Jan Cihak			CZE	132			
19	Stepan Stefanchuk	UKR	138	22 Radoje Blagojevic			SRB	135	25 Alexey Burdov			RUS	127			

1	Alexandr Vyazov	RUS	213	NL-1	MG-1	HM-1	KW-1	NK-1	KA-1	TV-4	MM-5	NA-7			
2	Volodymyr Sychov	SLO	209	EU-1	SL-1	HE-1	RB-1	AN-1	EF-1	MR-1	ZU-1	JM-1	KZ-6	VS-7	CB-2
3	Reinhard Truppe	AUT	206	MM-1	PR-1	KS-1	CZ-1	RB-2	EU-3	SM-3	KW-3	HE-4	NA-6	MR-3	
4	Juri Roots	EST	186	SE-1	DK-1	EU-2	SL-2	NO-2							
5	Laszlo Patocs	HUN	181	DZ-1	HG-1	KS-2	JM-2	JI-4	SM-5						
6	Nikolay Rekhin	RUS	181	MC-1	AM-1	PR-2	KA-2	EL-4	NL-7	HM-8	CM-5				
7	Yaroslav Vasilyev	BLR	173	KZ-1	EF-2	MR-2	CZ-2	RB-5							
8	Darijo Jermol	CRO	170	SF-1	IK-1	MS-2	KS-3	CZ-3							
9	Oleg Grishkov	UKR	162	LV-1	BU-2	MC-2	PR-3	AN-4	CB-5						
10	Artem Babenko	UKR	151	TV-1	NA-1	NL-5	MM-6	MG-8							
11	Jerzy Wlodarczyk	POL	148	HO-1	KZ-2	SZ-3	RB-4								
12	Yuri Perchuk	RUS	141	CM-1	TV-3	GM-3	MG-6	NL-12	HM-7	EL-8					
13	Alan Jack	GBR	135	EQ-1	SH-2	KW-4	PT-5								
14	Vachslv Aleksandrov	UKR	134	VS-1	HN-1	AN-3									
15	Artur Kaitchuk	RUS	130	TV-2	HM-2	GM-2	CM-3								
16	Balazs Bauer	HUN	121	HG-2	JI-3	DZ-3	SL-6	SM-6							
17	Yury Shvedenkov	CAN	119	HC-1	CN-1	MG-9									
18	Stanko Dobrev	BUL	116	BU-1	SF-2	PR-4									
19	Edward Burek	POL	113	SZ-1	KZ-3	RB-3									
20	Claus-Peter Wachtler	GER	106	JI-2	SE-3	TV-9	MG-10	EU-12							

1	Luca Aringer	AUT	209
2	Amit Kidron	ISR	204
3	Bojan Dimeski	MKD	201
4	Samuel Zachara	SVK	186
5	Mikhail Lomov	RUS	184
6	Andrija Pesic	SRB	175

1	Bojan Gostojic	SRB	203
2	Pavel Lomov	RUS	203
3	Dawid Lipski	POL	200
4	Kristina Ivanova	BUL	200
5	Riho-Ats Saatvali	EST	200
6	Vladislav Dreier	LAT	170

1	Elizaveta Klimakova	RUS	201
2	Daniel Bogomaz	POL	150
3	Vladislav Lipov	RUS	100
4	Sevak Malkhasyan	USA	100
5	Maxim Poliakov	RUS	91
6	Soslan Kupeev	RUS	55

FAI FREE FLIGHT RANKING

Ranking for January 1. Only one new competition has contributed to the ranking since the previous positions in November. Other changes of points and position are because of the reduced effect of 2014 competitions (points will decrease when a good 2014 result reduces, or may increase if the effect of a bad (negative score) result has reduced).

Full details at www.freeflightnews.org.uk/ranking/latest.htm

		country	pts	place change	pts change	recent result
F1A						
1	Jama Danier	CAN	285	0	-2	
2	Per Findahl	SWE	282	0	+7	
3	Yuri Titov	RUS	245	0	-14	
4	Roland Koglot	SLO	236	0	-6	
5	Mikhail Kosonozhkin	RUS	232	+2	+10	HN15=54
6	Maarten van Dijk	NED	231	-1	+10	
7	Rudolf Holzleitner	AUT	223	-1	-12	
8	Jes Nyhegn	DEN	191	+5	+2	
9	Szilard Szijjarto	ROU	187	+1	-22	
10	Anton Gorsky	RUS	185	-2	-34	

F1B

1	Alexander Andriukov	USA	314	0	-2	
2	Bojan Gostojic	SRB	262	0	+1	
3	Oleg Kulakovsky	UKR	257	+1	+1	
4	Adam Krawiec	POL	251	-1	-7	
5	Anatoli Ribchenkov	RUS	246	0	-9	
6	Svetozar Gostojic	SRB	229	0	-17	
7	Bernd Silz	GER	219	+2	-11	
7	Evgeny Gorban	UKR	219	0	-25	
9	Bror Eimar	SWE	216	+1	-6	
9	Timur Useynov	RUS	216	-1	-17	HN15=32

F1C

1	Alexandr Vyazov	RUS	314	0	-2	
2	Volodymyr Sychoy	SLO	300	0	0	
3	Reinhard Truppe	AUT	280	0	-7	
4	V Aleksandrov	UKR	264	0	+1	HN15=51
5	Juri Roots	EST	250	0	-8	
6	Nikolay Rekhin	RUS	230	0	-17	
6	Darijo Jermol	CRO	230	+1	-11	
8	Laszlo Patocs	HUN	225	+2	+2	
9	Artem Babenko	UKR	223	-1	-13	
10	Yaroslav Vasiliev	BLR	213	+1	-3	

F1E

1	Peter Brocks	USA	201	0	-10	
2	Stanislaw Kubit	POL	193	0	-15	
3	Marian Popescu	ROU	184	+2	+2	
3	Jacek Zurowski	POL	184	+1	-6	
5	Miroslav Drmla	SVK	180	+1	0	
6	Adrian Draghici	ROU	171	+1	0	
7	Frantisek Kanczok	POL	170	-4	-20	
8	Jiri Blazek	CZE	161	+2	0	
9	Andrei Anca	ROU	152	-1	-12	
10	Alain Roux	FRA	149	+1	0	

LE GRAND COUPE DE BIRMINGHAM, NORTH LUFFENHAM, DEC 6

Report by Stuart Darmon.

The second December Coupe hosted by Birmingham MAC was preceded by several weeks of exceptionally wet and windy weather, and a few days prior to the event, winds of 40 plus MPH were forecast for Sunday. By Thursday, however, predictions began to suggest that the wind would drop during the afternoon. Such is the accuracy of modern meteorology that the fourteen entrants who made the leap of faith- including Didier Chevenard from France- were rewarded with very

flyable conditions after lunch. CD Kris Best, aided by Bill Colledge, decided to fly only one round of F1G before midday instead of the scheduled two, and set the max at 60 seconds, which all but two achieved in the surprisingly smooth, if still breezy, conditions. There followed two 90 second rounds, and finally a full two minute max, clearly correctly judged as just one entrant achieved a full score. Lift was evident all day, with some flights looking comfortable from the word go, and others less so. Last year's winner Phil Ball looked for a while as though he would land with the prop running in round 4, but in the end dropped only 21 seconds. The contest was won quite literally in the last minute when Gavin Manion, who had broken three motors on the trot, launched into a lovely patch fifty seconds from the final hooter to win the AeroModeller trophy, two seconds ahead of Roy Vaughn.

Vintage attracted only two scoring entries, no doubt because flying F1G in such conditions is quite enough work for one day. Dave Taylor, however, gave it his undivided attention and did it properly, with a full house from his Etienvre.

Prize giving was a convivial affair held in the Luffenham golf club with suitable refreshments, and again Aeromodeller Editor Andrew Boddington was on hand to present the AM trophy on its fortieth anniversary, as well as books and framed prints donated by ADH Publishing.

Birmingham MAC thanks everyone who took part on a far from ideal day, and we have every intention of repeating the event- but hopefully not the weather- in 2016.

A few observations in closing: First, flying in rounds may not be universally popular in the UK, but with a *competent* CD a meaningful contest can be held in adverse conditions without scattering models across the countryside- surely better than some of the alternatives we may be asked to accept. Second, F1G remains a class where a simple, reliable aeroplane flown well can win at the highest level. Finally, this year's entry hailed almost entirely from the South. Perhaps this is because the weather was worse up North, perhaps because the event now counts toward the Southern Coupe League. It would be great to see some of the Luminaries from Northern Area next year.

F1G 13 flew

1	G Manion	360
2	R Vaughn	358
3	P Tolhurst	321
4	A Moorhouse	320
5	P Ball	310
6	D Chavenard	FRA 304

Vintage

1	D Taylor	180
2	T Bailey	95

Special awards

Best result in both events	Terry Bailey
Top placed Etienvre	Dave Taylor

SOUTHERN COUPE LEAGUE 2016

In case you hadn't noticed the Southern Coupe League 2016 season began in 2015 with the Grand Coupe de Birmingham at North Luffenham on December 6th. In spite of the conditions fourteen flew. Gavin Manion won and so now heads the new league table with sixteen points (see Stuart Darmon's report).

The provisional calendar for 2016 lists eight events, many still to be confirmed: your best five scores will count.

Dec 6 2015	Birmingham	N Luffenham
Feb 14	1st Area	Beaulieu/ Ashdown/ Merryfield/N Luffenham
Apr 24	London Gala	Salisbury Plain
June	Oxford Gala	Port Meadow
July	Odiham	RAF Odiham
Aug 20	Southern Gala	Salisbury Plain
Sept 18	Crookham Gala	Salisbury Plain
TBA	Coupe Europa	TBA

League (top 6)

1	G. Manion	Birmingham	16
2	R. Vaughn	Crookham	12
3	P. Tolhurst	Crookham	10
3	A. Moorhouse	Vikings	10
5	P. Ball	Grantham	8
6	D. Chevanard	Beaujolais	7

NEWS FROM BMFA FF TECH COMMITTEE

All correspondence re this news to the FFTC Secretary: Chris Strachan 56 Way Lane, Waterbeach, Cambridge, CB25 9NQ.
E-mail: chris.strachan@btinternet.com

The FFTC met at the Leicester office on 2 December 2015.

Season Ticket

The cost of the Season Ticket for 2016 has been set at £50. It represents great value covering entry fees to all contests on the Calendar apart from the Nationals. It includes both open internationals, the two trials events, centralised and area centralised contests. If you buy one the only other contest fees remaining will be the Site Access Charge for Area Centralised contests (if applicable) and the Nationals.

To purchase a season ticket for 2016 please write to John Carter at:- La Petite Maison, 45 Grindley Lane, Meir Heath, Stoke on Trent, Staffs, ST3 7LN. Please send John your BMFA membership number, name and address, a cheque for £50, your mobile and home telephone numbers. Please also include a stamped addressed envelope for the return of the card.

Site Access Charge

The Site Access Charge shall be paid by everyone flying at a site where it is applicable, whether trimming, fun flying or competing. This is to ensure that everyone contributes towards the cost of the licence for the use of the site on the day.

Nationals

The Free Flight Nationals will take place on May 28-30 at RAF Barkston Heath. There may be some building works on the eastern edge of airfield that we will have to take into consideration with our competitions.

Team Selection for 2016 Junior World Championships

The Championships this year is to be held in Prilep (Former Yugoslavia Rep. of Macedonia) between August 1-7. Team selection will be based on the results of juniors in F1A, F1B and F1P (to be flown alongside F1C) at the Nationals.

The BMFA and the FFTC are very keen on sending a Junior Team to the World Championships, so if you are interested please have a go.

Salisbury Plain

Free Flight Trimming and Sport flying on Salisbury Plain Area 8 will be available for most weekends in 2016, from February to mid December.

To use this great site on the available days all users must be in possession of a current permit and fully comply with its requirements. An application form to obtain a permit is available from the BMFA office, with the conditions of use attached. This must be completed and returned with the fee before a permit will be issued. The cost will be £15.

Note that this permit is for Trimming and Sport flying only. Those participating in Contests will be required to pay the normal site access fee even if they hold a Salisbury Plain Permit.

BMFA FREE FLIGHT CHAMPIONSHIPS

1	P Ball	166.5	25	D Taylor	30
2	T Grey	102	27	S Barnes	28
3	S Willis	90.5	28	A Brocklehurst	27.5
4	A Shepherd	84.5	29	T Payne	25
5	C Strachan	68	30	G Percival	25
6	C Redrup	63	31	P Tribe	25
7	C Parry	61	31	D Cox	24.5
8	C Foster	60	31	J Cooper	24
9	P Watson	59.5	31	J Pennington	23
10	D Davitt	55	31	A Crisp	22
11	F Rushby	43.5	36	P Woodhouse	22
12	T Tyson	39.5	37	A Beales	21
13	P Seeley	39	38	M Cook	21
15	A Moorhouse	38	38	R Vaughn	21
15	S Dixon	37.5	38	S Darman	19.5
17	P Tolhurst	36.5	41	S Feilding	18.5
18	I Davitt	36	42	M Lester	18.5
19	R Heap	36	42	E Challis	18
20	I Clarke	34	44	W Dennis	18
21	M Marshall	33	44	S White	18
22	N Allen	31.5	45	R Jack	17
22	A Jack	31.5	45	P Williams	17
24	J Carter	31	45	J Patton	16.5
25	M Page	30	45	M Quinn	16.5

CIAM CALENDAR 2016

The provisional calendar published in FFn last month has still not been confirmed. However, one event was omitted from that listing, details as follows:

July 3 Canada Cup. F1A F1B F1C F1Q. World
Tottenham, Cup event. Entry fee: US\$30. Contact:
Ontario, Canada Leslie Farkas, 21 Misty Moor Drive,
Richmond Hill, Ontario, L4C6P9, Canada,
tel: +1 905 886 6959, email:
aljolie@sympatico.ca

UK COMPETITION NEWS

OXFORD MFC FREE FLIGHT RALLY will be at Port Meadow, Wolvercote, Oxford on June 11 and 12. 'Champagne flyoffs' for F1G, F1H, and HLG/Catapult will start at 6.30pm on the Saturday. Flying on Sunday starts at 10am with the following events, max to be decided on the day:

Flown to 5 flights in rounds: F1G, F1H, E30/P30/CO2 combined.

Flown with 3 flights with no rounds will be: mini vintage rubber (34" max span), vintage+classic glider combined, tailless rubber+glider combined, Hi-start glider (any design, 36" max span), and HLG/Catapult combined which will be flown from a box 7x1 min flights.

Gliders will use 50m towlines. Hi-start gliders launching line 30m total including 7.5m rubber. No thermistors, streamers on poles, bubbles, etc. No i/c power models to be flown. All flyers must be insured. Contact: Andrew Crisp, 4 Grove Street, Oxford OX2 7JT tel 01865 553800.

NOTICEBOARD

FOR SALE:- Verbitsky F1C model, complete and ready to fly. Carbon wing, VE geared motor, carbon 3 blade folding prop. Good condition. No RDT but can be easily fitted. Surplus to requirements. Offers invited around £600. Please contact Adrian Dean on ade120264@hotmail.co.uk.

FFN INDEX 2015

Not listed here are UK and International Competition News.
Location shown as page/month

MODEL DRAWINGS

F1A	Falcon 35	Jan Vosejpka	32/4	FIH		Bohumil Klima	36/4
F1B	Yugo Victor	Andrew Crisp	63/7	F1H	Kit	Gerhard Aringer	41/5
F1G	C-03	Alan Brocklehurst	20/3	E36	El Filur	Per Grunnet.	12/2

ARTICLES AND NOTES

BMFA	
Calendar 2016	111/11
Equinox Cup/Stonehenge Cup	67/7, 95/9
FF Championships	80/8, 101/10
Free Flight Forum	45/5, 67/7, 96/9, 108/10, 116/11
Future of Free Flight	125/12
News from FFTC	23/3, 32/4, 53/6, 65/7, 96/9, 106/10
Salisbury Plain Area 8	9/1, 81/8
Team Selection	126/12
CIAM	
Anti-Doping	38/4
Bureau meeting	120/12
Calendar 2015	9/1
Calendar 2016	120/12
F1C Rules	66/7
Plenary Meeting	42/5
Proposals	2/1, 18/2, 30/3
UK Performance Paper	3/1
Correspondence	
Crisp	30/3
Darmon	54/6
Hipperson	16/2
Williams	38/4
F1E World Championship	90/9
FFn	2/1, 116/11
FFn Index 2014	10/1
Free Flight Ranking	15/2, 58/6, 82/8, 106/10, 128/12
Indoor European Champs results	40/5
Indoor World Records	96/9, 108/10, 127/12
Junior European Championship	
Team	34/4
Reports and results	86/9, 98/10
Leagues	
Biggles	30/3, 67/7, 95/9, 115/11
F1H Euro	58/6, 95/9, 126/12
F1J Euro	30/3, 67/7, 95/9, 115/11
Southern Coupe	8/1, 24/3, 67/7, 81/8, 95/9, 102/10, 114/11
Merryfield	128/12
Nitromethane	9/1
RDT System	46/5
Sport on the radio	108/10
Timers for electric duration	110/11
Timers for E36	128/12
Wigan Swap Meet	108/10
World Championships In Mongolia	
British team	60/7
Reports and results	70/8, 84/9
UK Supporters	18/2
World Cup	5/1, 55/6, 9/8, 107/10, 128/12

ITEMS FOR SALE

Joe Flynn's models	82/8
Noticeboard	9/1, 30/3, 38/4, 46/5, 58/6, 68/7, 108/10, 116/11
NFFS Symposium Reports	82/8, 96/9

CONTEST RESULTS

Chronological order, start date only given to save space on some entries

Coupe Birmingham, N Luffenham, Dec 7	8/1
Hanukkah Open, Orim, Israel, Dec 19	5/1
King Orange, Florida, Dec 29 – 31	17/2
BMFA 1st Area Meeting, February 8	26/3
Kiwi Cup, Lost Hills, USA, Feb 7-8	27/3
North American Cup, Lost Hills, Feb 10	28/3
MaxMen, Lost Hills, USA Feb 13-15	28/3
The Fabulous February – Lost Hills	26/3
F1E at Lost Hills	29/3
Philippe Lepage, Viabon, France, Feb 28	34/4
Swedish Moose Cup, Finland, March 5	35/4
Bear Cup, Finland, March 7-8	35/4
F1E Winter Cup, Czech Rep, March 7	35/4
Holiday on Ice, Norway, March 14	35/4
BMFA 2nd Area Meeting, March 1	36/4
BMFA 3rd Area Meeting, March 22	45/5
BMFA Northern Gala, N Luff, April 3	45/5
Passover Open, Israel, April 10	44/5, 54/6
F1E Oberkotzau, Germany, April 11-12	44/5
Harghita Cup, Salonta, Romania, Apr 11	44/5
Jumbo Cup, Lucenec, Slovakia, Apr 18	44/5
London Gala, Salisbury Plain, Apr 18	57/6
Australian FF Champs, Australia, Apr 17	54/6
Southern Cross cup, Australia, April 23	54/6
Kup Slavonije, Croatia, April 25	54/6
Croydon Wakefield, M Wallop, May 4	57/6
F1E, Liptovsky M, Slovakia, May 9-10	56/6
Salonta Cup, Romania, May 9	54/6
Szabó Miklós, Salonta Romania, May 10	55/6
Sofia Cup, Pazardzik, Bulgaria, May 22	55/6
F1E Rupea, Romania, May 23-24	56/6
BMFA Nationals, Barkston, May 23-25	48/6
	62/7
Srem Cup, Zrenjanin, Serbia, May 29	55/6
Istanbul Cup, Vize, Turkey, June 5-7	63/7
BMFA 4th Area Meeting, June 7	63/7
Djordje Zigic, Zrenjanin, Serbia, Jun 13	63/7
Monti Lessini F1E, Italy, June 13-14	66/7
Oxford Rally, Port Meadow, June 20	80/8
Herend Cup, Tapolca, Hungary, June 20	65/7

Swedish Cup, Rinkaby, Sweden, Jun 25	66/7
Danish Cup, Rinkaby, Sweden, June 26	65/7
BMFA 5th Area Meeting, June 28	79/8
BMFA F1E, Burrough Hill, July 5	67/7
Denver World Cup events July 10-12	78/8
Huron Cup, Tottenham, Canada, July 11	78/8
Canada Cup, Borden, Canada, July 12	78/8
BMFA 6th Area Meeting, July 12	79/8
Odiham 67th FF Rally, July 18	81/8
Tuvshin Memorial Cup, Mongolia, Jul 21	77/8
Mongolia Cup, Ulaanbaatar, July 24-27	78/8
East Anglian Gala Sculthorpe, Aug 1	94/9
Moncontour 2 minutes, August 6	93/9
Poitou, Noizé, France, August 7-8	93/9
BMFA F1E, Burrough Hill, August 9	95/9
Timperley FF Gala, Luffenham, Aug 16	95/9
Izet Kurtalic, Bosnia-Herz, Aug 22	93/9
Southern Gala, Salisbury Plain, Aug 22	100/10
World Cup Kietrz, Poland, August 22	104/10
Raciborz Cup, Kietrz, Poland, Aug 23	105/10
Zlatibor Cup, Zlatibor, Serbia, Aug 23	92/9
Eifelpokal, Zülrich, Germany, Aug 27	105/10
BMFA 2 nd Team Selection, Sculthorpe, Sep 5	101/10
Cro Cup Zapresic, Croatia, Sep 5	105/10
Mura Cup of Slovenia, Croatia, Sep 6	106/10
Poitou F1E, Tourtenay, Sept 12-13	98/10
BMFA 7th Area Meeting, Sept 13	100/10
Poland F1E, September 18 to 20	99/10
Bulgaria cup, Bulgaria, Sept 18	106/10
Hogo Cup, Slovakia, September 19	115/11
Crookham Gala, Salisbury Plain, Sep 20	102/10
Stonehenge Cup/Equinox Cup, Salisbury Plain, Sep 26-27	103/10
Prilep Cup, Macedonia, Sept 26	115/11
World Cup, Prilep, Macedonia, Sep 27	116/11
Jihocesky Pohar, Czech Rep, Oct 3	116/11
Anatolian, Ankara, Turkey, Oct 3	116/11
Coupe Europa, Middle Wallop, Oct 4	113/11
BMFA F1E, Blacka, October 10	126/12
Sierra Cup, Lost Hills, USA, Oct 11	116/11
BMFA 8th Area Meeting, Oct 18	112/11
Midland Gala, Luffenham, Oct 24	113/11
Eurofly, Switzerland, Oct 31 - Nov 1	126/12