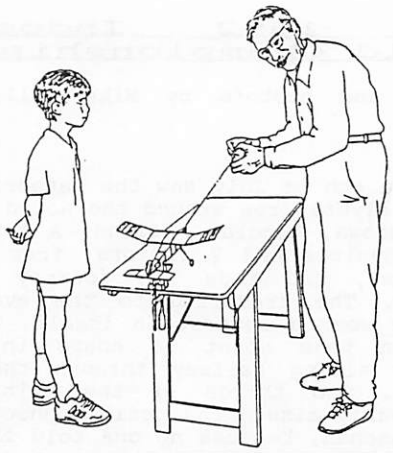
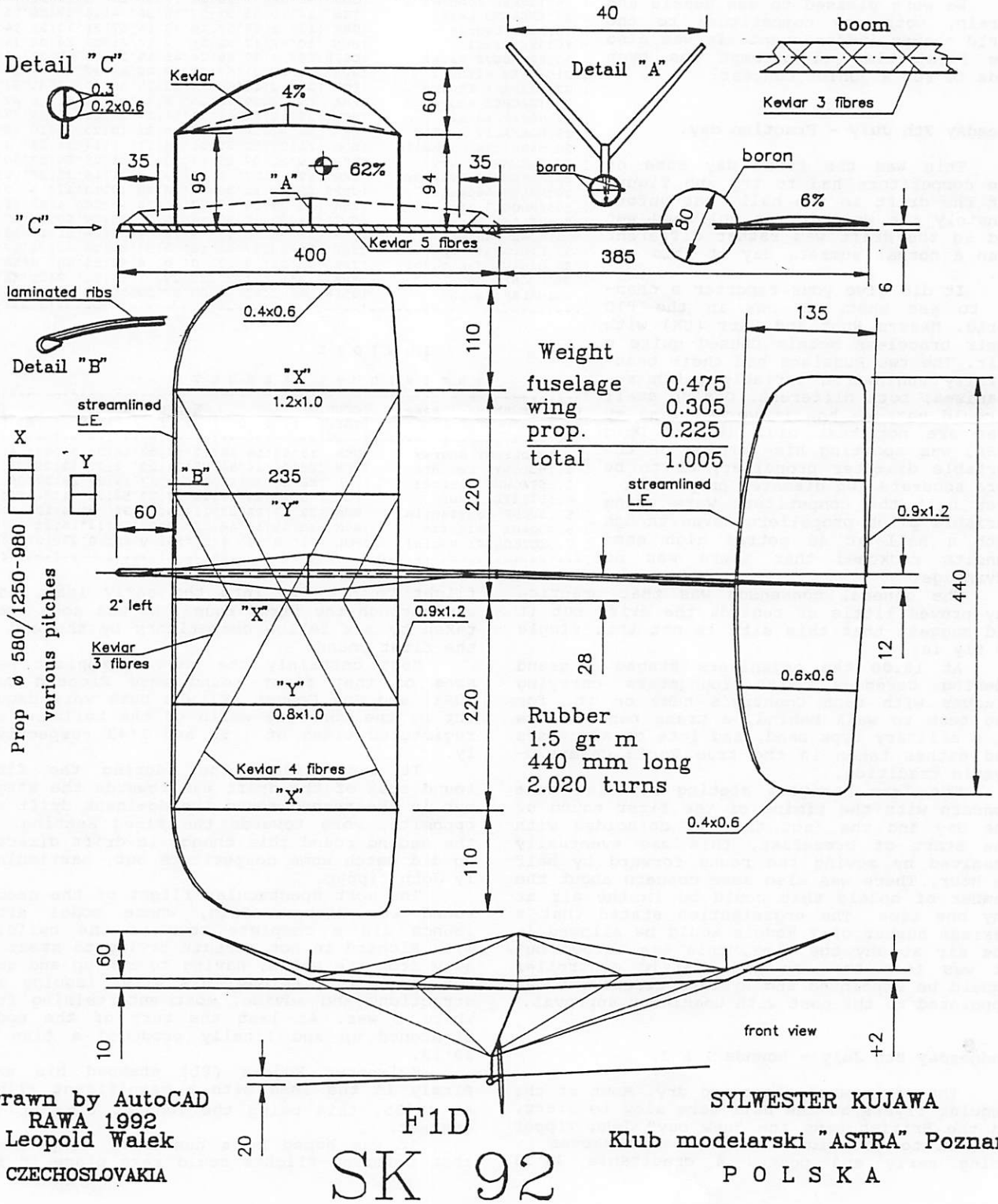
News Indoor



Issue 20 November 1992



Drawn by AutoCAD
RAWA 1992
Leopold Walek
CZECHOSLOVAKIA

F1D

SK 92

SYLWESTER KUJAWA
Klub modelarski "ASTRA" Poznan
P O L S K A

The 1992 Indoor World Championships

Report and photo's by Mike Colling (UK)

The 6th of July saw the gathering of F1D flyers from around the World at Hala Ludowa, Wroclaw, Poland. A total of 36 Seniors and 7 Juniors, from 13 countries, had made the journey to Wroclaw. The traveling to the event was for some a contest in itself. The Romanian team spent 36 hours in a railway siding halfway through their journey. Two thirds of the British team nearly missed the train connection at Aachen, because no one told them that they had to change trains, never fully trust travel agents.

We were pleased to see Russia and Ukrain, both new competitors to the world champs indoor event. It was also the first time an attempt has been made to run a junior contest.

Tuesday 7th July - Practice day.

This was the first day some of the competitors had to try and figure out the drift in the hall, but unfortunately the weather was dull and wet and so the drift was rather different than a normal summers day at this site.

It did give your reporter a chance to see what was new in the F1D world. Messrs Hunt and Barr (UK) with their braceless models caused quite a stir. The two Russians had their beautifully engineered variable pitch mechanisms, both different. One so small I could not see how it worked, and my eyes are not that bad. Richard Doig (USA) was sporting his version of the variable diameter propeller, or to be more accurate two diameter propeller. Over half the competitors were using variable pitch propellers, even though with a hall at 48 metres high some pundits reckoned that there was no advantage.

The general consensus was that practice day proved little as regards the drift but it did suggest that this site is not that simple to fly in.

At 18.00 the organizers staged a grand Opening Ceremony, with Youngsters carrying plaques with each Country's name on it, for the team to walk behind, a brass band or was it a military type band, and lots of addresses and oathes taken in the true World Champs/Olympic tradition.

The Team Managers meeting revealed some concern with the timing of the first round of the day and the fact that it coincided with the start of breakfast, this was eventually resolved by moving the round forward by half an hour. There was also some concern about the number of models that could be in the air at any one time. The organisation stated that a maximum number of 7 models would be allowed in the air at any one time, this was agreed but it was felt that an air traffic controller should be appointed and Ryszard Czechowski was appointed to the post with unanimous approval.

Wednesday 8th July - Rounds 1 & 2.

The day dawned clear and dry. Most of the regular flyers at the hall were slow to start. In the British camp the "new boy" John Tipper decided to get rid of some of his nerves by going early and posted a creditable 33'38 flight to put him into the early lead, half way through the first round. He was soon overtaken by six fellow competitors by the end of the first round.

Most certainly the most unhappiest persons of that first round were Richard Doig (USA) and Guy Cognet (F) who both were caught out by the concrete walls of the building and registered times of 1'59 and 1'43 respectively.

It was evident that during the first round most of the drift was towards the stage, but in the second round the dominant drift was opposite, more towards the fixed seating. In the second round this change in drift direction did catch some competitors out, particularly John Tipper.

The most spectacular flight of the second round was Richard Doig, whose model after launch did a complete tour of the building with Richard in hot pursuit trying to steer it away from the walls, having to run up and down the steps with Melony, his wife, issuing instructions and advice, most entertaining from where I was. At last the turn of the model tightened up and finally produced a time of 39'19.

Sylwester Kujawa (PL) stamped his mark firmly in the lead with a magnificent flight of 43'35, this being the longest time of the contest.

It was hoped by a number of competitors that trimming flights could take place in the

XVIth WORLD CHAMPIONSHIPS
INDOOR MODELS CLASS F1D
F.A.I. POLAND - WROCLAW '92

INDIVIDUAL RESULTS:

Place	SURNAME & Name	COUNTRY:	Round 1.	2.	3.	4.	5.	6.	TOTAL:
1.	KUJAWA Sylwester	POL	37' 6	43'35	37'18	40'11	37'44	41'53	85'28
2.	BUTTY Rene	SWI	9'43	37'57	38'42	40'25	12'54	40' 8	80'33
3.	BANKS Cezar	USA	32'39	0' 5	32'41	39'52	27' 7	38'22	78'14
4.	DOIG Richard	USA	1'59	39'19	36'46	34'11	36' 2	11'36	76' 5
5.	SCHRAMM Lutz	GER	35'51	22'19	37' 1	13'40	37'33	36'17	74'34
6.	DIHM Jan	POL	27'24	18'20	29'44	37' 5	35'22	37'10	74'15
7.	HUNT Bernard	GBR	36' 8	36' 7	37'53	19' 0	33'31	34'41	74' 1
8.	POPA Aurel	ROM	35'39	37' 1	33'26	33'12	34'57	1'16	72'40
9.	ORSOVAI Dezso	HUN	36' 4	32' 4	11'20	14'21	16'33	36'34	72'38
10.	REE Andras	HUN	12'46	35'22	13'13	37'15	14'10	14'14	72'37
11.	NIMPTSCH Werner	GER	11'29	20'50	16'16	9'49	33'16	37' 2	70'18
12.	KOMAROV Vladimir	RUS	33'55	33'52	31' 6	34'54	26'32	4'40	68'49
13.	LOTZ Reiner	GER	29'10	33'53	15'38	34' 1	16'13	33'53	67'54
14.	ENOMOTO Hideyo	JAP	18' 3	30'21	32'58	33'56	30'30	9'38	66'54
15.	LOUCKA Larry	USA	8'51	11'55	28'28	33'27	29'41	31'51	65'18
16.	TIPPER John K.	GBR	33'38	7'18	26'17	30'20	5'23	31'16	64'54
17.	ENGLUND Leif	FIN	14'10	33'51	27'18	30' 4	16'39	26'25	63'55
18.	BARR Laurie	GBR	13' 5	29'57	10'42	14'57	31'30	31'54	63'24
19.	REE Laszlo	HUN	10'42	13'52	31' 7	14'41	23'29	32'14	63'21
20.	BRANDEJS Karel	CSFR	28' 2	29'58	24'45	19'30	30'55	32' 9	63' 4
21.	AGEEV Mikhail	RUS	30'47	31'57	29'43	29'49	27'30	1'31	62'44
22.	CIAPALA Edward	POL	20' 2	18'53	18'53	29'40	30'17	31'50	62' 7
23.	TRACHEZ Andre	FRA	29'38	29'10	26' 5	11'14	31'51	6'47	61'29
24.	MORAR Aurel	ROM	32'19	15'11	28'54	27'38	26' 5	24'47	61'13
25.	MOSKALEV Vasily	UKR	24'42	24'11	27' 0	31'10	20'35	10'49	58'10
26.	MANGALEA Corneliu	ROM	14'26	22'51	31'26	17' 1	14'34	25' 3	56'29
27.	ZAKHAROV Yury	UKR	9'32	27'55	17'33	26' 1	25'56	27'50	55'45
28.	MOTSHULKO Viktor	UKR	19' 8	27' 7	22'29	24'31	16'35	27'10	54'17
29.	WALEK Leopold	CSFR	23'14	11'56	7'58	29'10	13'17	0' 0	52'24
30.	FRUGOLI Jean F.	FRA	18'36	13'17	27' 4	18'46	20' 4	25'15	52'19
31.	KELLER Peter	SWI	11'29	12'50	14'28	21'43	29'50	21'59	51'49
32.	NORE Pentti	FIN	24' 6	22'15	9'22	9'38	26'51	10'58	50'57
33.	KINOSHITA Satoshi	JAP	25'23	17'42	18' 3	24'52	10'41	1'17	50'15
34.	MISAWA Masatoshi	JAP	20'21	0'10	0' 0	8'52	28'20	0'53	48'41
35.	COGNET Guy	FRA	1'43	1'53	23'29	1'24	22' 2	22'58	46'27
36.	WALEK Vaclav	CSFR	6' 2	12'40	23'37	20'26	0' 0	12'24	44' 3

JUNIORS:

INDIVIDUAL RESULTS:

Place	SURNAME & Name	COUNTRY:	Round 1.	2.	3.	4.	5.	6.	TOTAL:
1.	PODLESNY Andrey	UKR	18'53	16'32	10'18	30'18	30'33	23' 4	60'51
2.	BOLONYI Levente	ROM	23'26	14'56	25'24	23' 0	27'13	28'33	55'46
3.	STACHNO Andrzej	POL	26'21	25'15	21' 2	27'19	27'36	27'36	55'12
4.	BIZIEL Jakub	POL	6'50	23'11	24'37	22'58	28'41	24'33	53'18
5.	BUCUR Constantin	ROM	22'27	25'33	21'26	15'35	8' 4	12'12	48' 0
6.	DOAGA Valentin	ROM	13'49	18'48	22' 8	22'55	14'14	22'44	45'39
7.	KOZŁOWSKI Maciej	POL	1' 8	19' 9	22'16	9'40	0'37	10'38	41'25

evening after the final round of the day. Unfortunately unbeknown to the contest organisers the hall was turned into a cinema in the evening so cutting short practice and model trimming time.

Thursday 9th July - Rounds 3 & 4.

Once again the weather was clear and dry. It was noticeable during the first round of the day that few flyers were trying to get their models right up to the top of the hall. Out of the 36 competitors only 14 were able to improve their times from the previous day. Guy Cognet was probably the most relieved having obtained his first flight of over two minutes, recording a time of 23'29.

Round four and things are starting to hot up. Cezar banks model climbed away from launch slowly, collided with another model, but freed itself and recorded a time of 39'52. Richard Doig's V.D. prop changed late, so his time of 34'11 gave him no improvement.

Whilst steering his model Laurie Barr (UK) had problems that resulted in a propeller blade changing its pitch and recorded a disappointing 14'57.

Vladimir Komarov (Russia) worked hard with steering to record a fourth round score of 34'54, he obviously knows the building well and was able to detect and respond to the small changes of flight path of the model.

It is now quite apparent that the best air is in the afternoon.

Friday 10th July - Rounds 5 & 6.

The major problem away from the contest was that late last night a water main that supplied this part of town burst and at the moment there is no water at the accommodation. This however did not stop the contest.

Prior to the fifth round starting Dezso Orso-vai (HUN) had a reflight but only obtained 14'21 and so did not improve his score.

Laurie Barr changed to his Hunt type braceless model. This produced a creditable 31'30 to move him from 31st position to 19th. Lutz Schramm (GER) put up a 5th round flight of 37'33 to push Bernard Hunt out of 4th position.

In the last round Werner Nimptsch (GER), who was lying 26th at the end of round 4, produced a spectacular flight of 37'02 to go into 11th position and so pushing the British team out of 3rd place. His model was very close to the wall at times and had to be steered regularly during most of its flight.

Richard Doig (USA) put his model into the wall to only record 11'36, keeping him in 4th place and his team in 2nd. Three more minutes and the results would have changed, bad luck Richard.

XVIth WORLD CHAMPIONSHIPS
INDOOR MODELS CLASS F1D
F.A.I. POLAND - WROCLAW '92

SENIORS

TEAM RESULTS:

Place:	COUNTRY	Competitor 1.	2.	3.	TOTAL:
1.	POLAND	85'28	74'15	62' 7	221'50
2.	U.S.A.	78'14	76' 5	65'18	219'37
3.	GERMANY	74'34	70'18	67'54	212'46
4.	HUNGARY	72'38	72'37	63'21	208'36
5.	GREAT BRITAIN	74' 1	64'54	63'24	202'19
6.	ROMANIA	72'40	61'13	56'29	190'22
7.	UKRAINE	58'10	55'45	54'17	168'12
8.	JAPAN	66'54	50'15	48'41	165'50
9.	FRANCE	61'29	52'19	46'27	160'15
10.	C.S.F.R.	63' 4	52'24	44' 3	159'31
11.	SWITZERLAND	80'33	51'49		132'22
12.	RUSSIA	68'49	62'44		131'33
13.	FINLAND	63'55	50'57		114'52

JUNIORS

TEAM RESULTS:

Place:	COUNTRY	Competitor 1.	2.	3.	TOTAL:
1.	POLAND	55'12	53'18	41'25	149'55
2.	ROMANIA	55'46	48' 0	45'39	149'25
3.	UKRAINE	60'51	-	-	60'51

To summarize the contest, it is a hard site to fly in and intimate knowledge of it proved to be a big advantage, as can be seen in the results. Although the site is a category IV site it was treated by most as a category III site, so VP propellers proved to be quite an advantage, the first six flyers all used them.

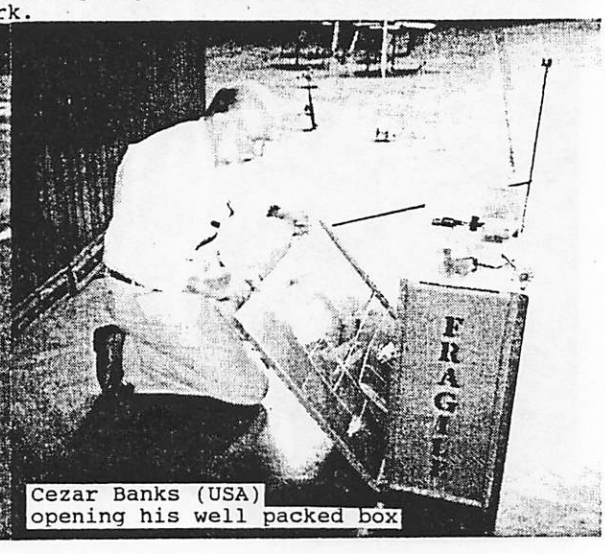
Saturday 11th July - Reserve day.

During the day we were treated to a tour of the town and visited a panorama painting, depicting a battle between the Poles and the Russians, that happened a hundred or so years ago. The commentary was in many languages, including English which helped me to enjoy the work.



World Champion 1992

Sylwester Kujawa (PL)
after his final flight



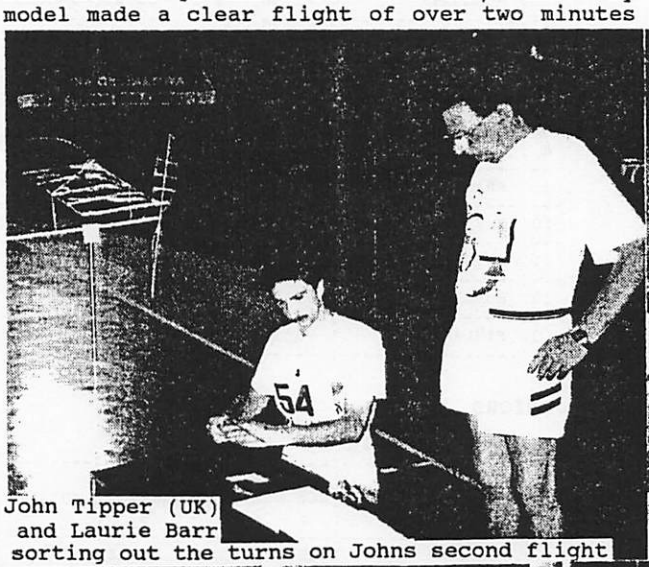
Cezar Banks (USA)
opening his well packed box

In the late afternoon there was the presentation of prizes and medals, accompanied by trumpeters, the raising of flags and playing of the National Anthems. A most impressive ceremony. This was followed by the Banquet.

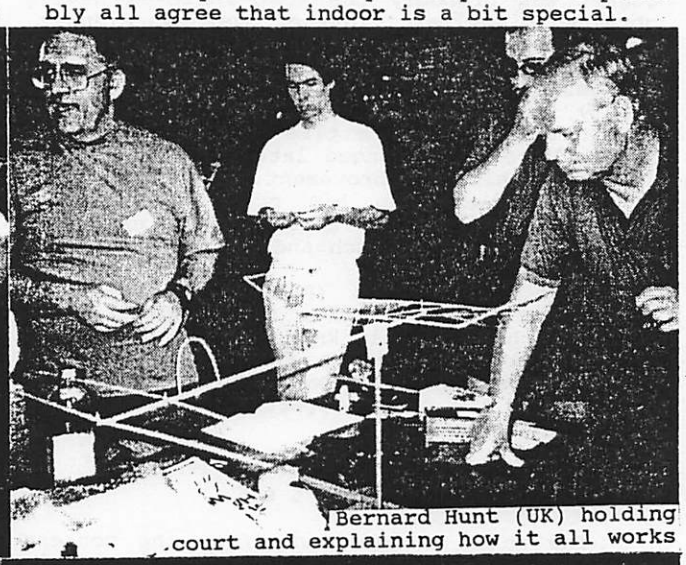
The Banquet was held in a Disco/Night club, that is in the hall complex. Competitors and guests were served food and drink by the clubs waitress staff, who were dressed in the most scantiest of costumes. Between the soup and the main course, Dr. Vernon Hacker and the Author put on a "Dual" type mass launch, Living Room Stick (Mini Stick) contest. Doc. managed to hang on a chandelier so winning the side bet of §2 and a silver medal, whilst my model made a clear flight of over two minutes to obtain the gold medal.

All in all the whole event was well run, the food was good and the accommodation acceptable. The only problem was the cinema and water which was out of the hands of the organisation.

The cost of renting indoor flying sites in the Eastern European Countries has risen a lot since the change in power, making a problem for the running of FAI Championships in the future. A suggestion was made that maybe the western countries should subsidise the renting of sites. This does have problems fitting into the FAI ruling of maximum entry fees to be paid at Championships but we probably all agree that indoor is a bit special.



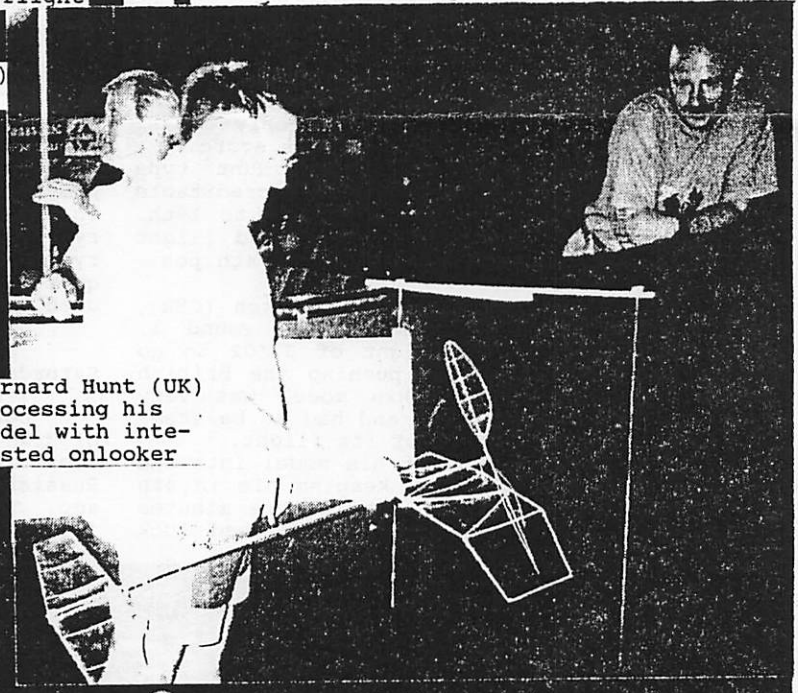
John Tipper (UK) and Laurie Barr sorting out the turns on Johns second flight



Bernard Hunt (UK) holding court and explaining how it all works



Andrej Stachno (PL) 3rd place Junior



Bernard Hunt (UK) processing his model with interested onlooker



Notes

1. Model all wood
   except 3x 0.1 boron on stick
   3x 0.07 (etched) boron on tail ribs



2. Wing posts 9lb 1.2x0.9 integral with stick.
   Wing has 5.0x1.2ø paper tubes
   which plug onto posts.
   Tail uses similar system.

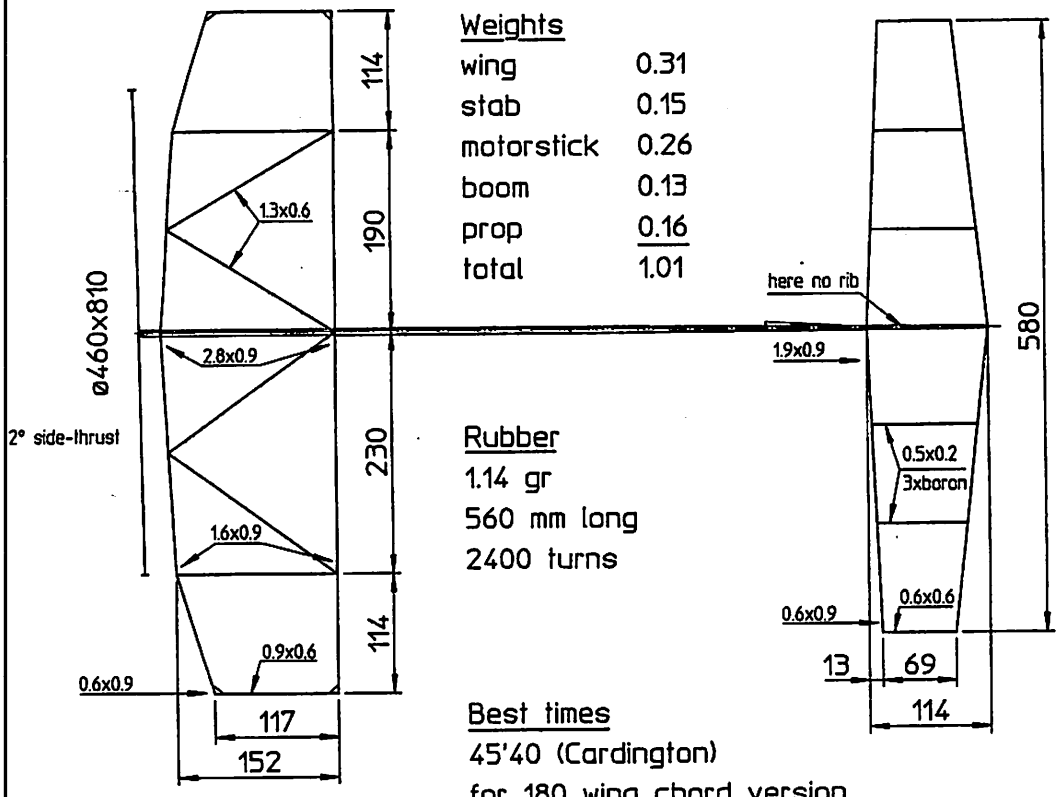
3. Wing spars 5lb 2.8x0.9>1.6x0.9>0.6x0.9
   Wing ribs 4.2lb 1.3x0.6
   Tail spars 4.2lb 1.9x0.9>0.6x0.9
   Stick 4.2lb x0.013"
   Boom 5lb x0.008"
   Posts 9lb 1.2x0.9
   Tail ribs 4.2lb 1.0x0.6 (if balsa)
   or 0.5x0.2 + 3xboron
   tip 0.6x0.6 (if balsa)

4. Stick single brace 0.0015"
   or 2x0.001" tungsten

5. Wings built 4 wash-in at left
   dihedral joint, but tips parallel

6. Up to 4 models pack into
   box 660x230x190
   suitable as handluggage for air travel

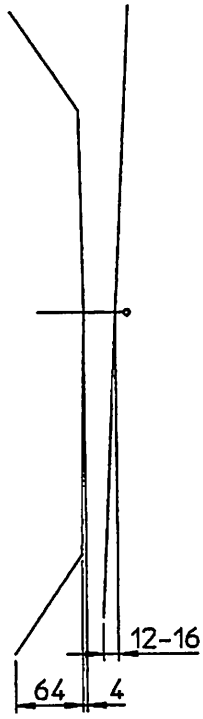
7. Prop spar at 65% chord inclined forward
   12 mm at tip to help wing clearance



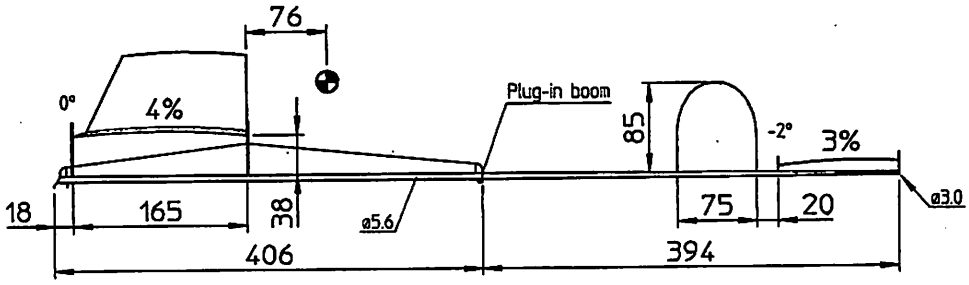
Weights

wing	0.31
stab	0.15
motorstick	0.26
boom	0.13
prop	0.16
total	1.01

Rubber
1.14 gr
560 mm long
2400 turns



Best times
45'40 (Cardington)
for 180 wing chord version
39'10 (Johnson City)
for 150 wing chord version



F1D
'TANDEM'
NO BRACING
BERNARD HUNT
United Kingdom

COMMENTS

by Ian Kaynes (UK)

Ian added the following comments to his (excellent) report on the World Championships in Free Flight News: Flown in parallel with the senior event the junior competition tended to get overlooked. Junior championships have been much promoted by Poland, reflecting their extensive junior programme - a few thousand flyers in the clubs and 200 selected to go to the recent junior nationals for indoor and outdoor FF and CL - and they were rewarded with the team prize, just ahead of Romania with the only other full team.

Polish junior world championships support has always been for the full FAI classes, F1A/B/C outdoor and F1D indoor. I could not help feeling that there was a tremendous gulf of experience and skill between the senior and junior flyers and these complex F1D models were effectively built and sometimes flown by proxy for their senior assistants. This unease was reinforced by seeing the lack of rapport in the Romanian team - at the banquet the seniors sent the juniors off to another table on their own so as to make space for the seniors to share the table with their international friends. It is interesting that F1D retains the builder of the model rule - unlike F1A/B/C which allows the iuniors to use purchased or loaned models built by experts - but ends up at a similar situation, exemplifying the difficulties in enforcing the builder of the model rule or interpreting how much help is reasonable for juniors.

In the outdoor classes Poland have suggested running full World Championships for the small-field mini classes F1G/H/J/K. This will need long term consideration and rule changes to allow it but it does suggest that this could be a future route for junior champs. Considering indoor, we now have international rules for EZB - F1L - which are becoming more accepted generally (there have been suggestions of fine tuning the minimum weight from 1.2 down to 1 gram). There are two possibilities here: this could form an additional full world championship class (which could be flown in just one extra day) and it might also make a more appropriate class to use for the junior championships. Comments please. The ultimate development to help the grass-roots aeromodelling programmes (indoor and out) would be to have extra simple classes flown by younger people, eg under 14 or 12, in junior world championships which would represent the ultimate competition stemming directly from the local and national beginner programmes.

COMMENTS ON F1L

From Boyd Felstead (AUS):

1. Yes, fine-tune minimum weight to 1.00 gram in line with F1D (why 1.2 gr. ever came into it, as the UK rules provided, is beyond me). 1.00 gr. will make it just a bit tougher to achieve, so a good thing.
2. Yes, make it a World Champ event/class - and <u>not</u> just for juniors as suggested.
3. Forget the 50% stab limit, just a hassle to process/calculate area - eg. parabolic, odd shapes, etc.. <u>If</u> 50% limit <u>is</u> retained, just accept the builders assurance it is within limits (40%, 45%, 50%, 55% isn't going to make any difference in performance). I presume the 50% is aimed to eliminate tandems, but F1D tandems, while doing 40+ wouldn't challenge Richmond, Banks, at 47-49 mins.. So let'em build (EZB) tandems if they want. There would be a sizeable weight penalty, particularly if 1.00 gr. rule is adopted.

From Thedo André:

1. Don't see a problem with 1.2 gram. Just hang another weight on the scale.
2. There can be time schedule problems when we make F1L a seniors World Championships. Imagine a three day WC at Cardington. In 1986 there were 57 F1D competitors. There will likely be more F1L fliers and these models have now reached the 25 mins. mark! There will be no time for practice flights. Can't let both types fly together, well?
3. What is your opinion on the disallowance of microfilm covering for F1L models? I think it is easier to cover with microfilm than with plastic film and the model can be built a little sturdier. Plus we will then have a step-up class to F1D, which we are missing now. I don't think a microfilm covered EZB will have a performance advantage.
4. I am opposed against F1L as a Junior WC class. F1D-Beginner and/or Penny Plane would be a far more suitable choice. Why do we want to hold Junior Champs? To choose the best flier from a group where the skills and experience differ so much, because of wide age and personal development differences? Where expedious help and coaching by an experienced flier can turn a relatively untalented junior into an expert? Or do we want an event that stimulates and promotes indoor flying by juniors? If the latter is our aim (and it should be that and nothing else in my view), then we must choose the most appropriate class and back it up by very good and continued beginner programs in every country!
5. The number of junior fliers is very low in every country. We should give more attention to the youth if we want to stimulate interest in indoorflying. A Junior World Champs Event can be a catalyst in this. But I would stress the word "Event" more than "Champs". Why not turn it into "Games" and allow larger teams from the larger countries? More classes can be flown. We can make a real fun event out of it. In my country the Junior Outdoor Champs have almost completely failed to attract more juniors to the hobby.

An Easy Bee simply is too difficult for juniors. They can build one when they reach the age of ±16. Within two years they are seniors. While a Siebenmann Moustique can be built at the age of 10! If an EZB turns out to have too weak a wing, the rules forbid you all the bracing means that can make your wing stiff and flyable. Repairing on the spot is hardly possible. Bracing a weak motorstick? Also forbidden. Very frustrating for a junior who is eager to see his model to fly well. These problems come to the surface when you go all out, ie. in a high ceiling site. For most of the juniors the Champs will be their first visit to a high ceiling site. Interest in F1L in my country is almost nil, whereas F1D Beginner is highly popular. Look at the Flemalle results for proof.

You will understand that I am not in favour of a Junior F1D Microfilm World Championship. I have many years of experience in helping juniors to learn indoor flying. Despite being a pure duration flyer myself, my aim is not to make expert flyers out of them. I know how widely the skills differ. And how very few are really talented. Whether they fly microfilm, HLG, Sainte Formula, Peanut, helicopter, or whatever else, I will be satisfied when indoor flying becomes their hobby. No more pretentions.
6. If we choose F1D-Beginner as the Junior WC class, are you satisfied with the rules as

they now are? Can we mix Penny Plane and F1D-Beginner?
7. While at the Flemalle competition this year I talked about F1D Beginner versus F1L with several people from different countries. They all agreed with me. Make your views known. We must communicate better, if we don't want to be surprised by unfavoured rules changes.

DIARY

14 Nov 1992 — 1. Dutch-German CO_2-Meeting.
Venlo, Holland — Seminar about CO_2-motors, F1K- (Free Flight) and F4E- (Scale) models. Organized by Klaus Jörg Hammerschmidt (D), Veltmanplatz 4, D-5100 Aachen, Germany, Tel. 0241-48531, and Wijnand de Joode (NL), Boenerstraat 20, NL-5913VE Venlo, The Netherlands, Tel. 077-511795. Place: Scholengemeenschap Uyterwaert, Venrayseweg 15, Venlo, The Netherlands.

1 Jan-31 March 1993 Living Room Stick Postal International.
Mike Colling, 403 Mossey Lea Road, Wrightington, Wigan, Lancs., England, WN6 9SB, Telephone 0257 452624.

25/26 Sept 1993 INTERSCALE '93
Nottingham, England — Reg Boor, 103 Crow Hill South, Middleton, Manchester M24 1LA, England

EDITORIAL

I had intended to include a nice two-page Peanut plan in this issue, but too many news items arrived during the last few weeks. But I can already promise that the next issue will be of much more interest to the non-duration flyers. It may even appear a little earlier than March. The number of subscribers has already more than doubled. I wish to thank all of you for subscribing and for the many encouraging comments. But don't relax now: send me your contributions and bring in more subscribers. Indoor News is back, but now it must stay!

GOODS, BOOKS & MISC.

O'Donnell mylar

John O'Donnell, see last issue for info about his mylar, has moved to 20 Manderville Close, Winstanley, Wigan WN3 6HL, Great Britain.

Somers mylar

Jan Somers now sells his mylar (2.4 g/m²) under the following conditions: 50 m per roll of 315mm width. Price is NLG 60,-. Add NLG 3,50 for postage. Add NLG 11,- for bank charges when paying via Postal Giro or Bank from countries outside the Netherlands (they deduct this amount from the money received). Postal giro account nr. 1187534. Bank account 22.51.-42.740. Address: Volkerak 20, 2401DE Alphen a/d Rijn, The Netherlands.

New type(s) of mylar.

Boyd Felstead reports the existence of two new types of mylar. The lightest and best seems to be sold by Wayne Trivin, 7403 W. Hanna Ave., Tampa, FL 33615, USA. It is reported to be 25% thinner and 23% lighter, yet is easier to handle and does not have as much static electricity cling. But one of Boyd's correspondents disagrees with the latter statement. Price for 20 ft x 12 inches is $20.00+$2.50 shipping anywhere in the US.

Boyd found an advertisement in Flying Models about Hyperlite film, stated to be lighter than Ultrafilm. Could this be the same as the Trivin film? Price for a 12' roll is $8.25. Add 10% for shipping, min. order $3.00. Available from Herr Engineering Co., 5648 Kingman Ave., Portage, IN 46368, USA.

Balloons

John Tipper (UK) has found a source of steering balloons and offers them to other indoor flyers. The balloons have a safe 30" (75 cm) inflation an max 40" (100 cm) and are good quality. Colours are red, blue and green. Price is £4.50 inclusive of postage and packing for Europe. The balloons are sold at cost price. John Tipper, 23 Green Lane, Chichester, West Sussex, PO19 4NS, England.

World Champs Video!

Leopold Walek (CS) has made a video recording of the F1D World Championships 1992. The tape contains three hours of live action: practice day, opening ceremony, the competition days and closing ceremony, it's all covered just as it happened. For insiders this is a must to have watched. Many tense moments are captured: scary starts of Cezar Banks, a lot of steering action, Kujawa's winning flights, commentary by the Americans, Bernard Hunt on his Tandem design, the Hungarian way of motor loading, Stan Zurad flying a Coupe d'Hiver-like model at the opening ceremony, etc.. The quality of recording is of quite good amateur standard. It is recorded in the Middle East SECAM system, which can not be played on western systems. I had to have it converted to PAL, which resulted in further loss of picture quality and cost me about 120 DM. I have tried to obtain details from Leopold whether he can supply copies in NTSC, PAL or (french) SECAM, but his answer did not arrive in time. The Eastern Bloc SECAM copy costs 30 DM and can be obtained from Leopold Walek, p.s. 12/III, 734 01 Karviná, Czechoslovakia. If any of the readers can be of help in converting and/or copying the tape to one of the above mentioned systems, please contact Leopold or the editor.

Lidberg plans

Al Lidberg supplies plans, documentation sets and some semi-kits of scale models for outdoor and indoor. Particularly his Peanut and No-Cal plans are of interest to us. Readers of Model Aviation will know the quality of his plans. The No-Cal plans include such rarities as a Hansa Airliner and even a Blohm & Voss BV-141!
Send $1.00 + SASE for catalogue to: A.A.Lidberg/model plan service, 614 E. Fordham, Tempe, AZ 85283, USA.

*	PEANUT SCALE	Set of 6	4.00/set
**	NOCALS: (includes one set of instructions/ ideas per order for any quantity)	1 to 4 plans	1.50/ea
		5 to 10	1.25/ea
		11 or more	1.00/ea
		ALL 22	18.00/set

Flying Model Warplanes
An International Guide To Plans and Kits

Compiled by John C. Fredriksen

This comprehensive reference book:
*Lists 8656 plans, kits and semi-kits
*Represents 623 types of historical aircraft
*Denotes products from 424 manufacturers from 15 countries
*Shows wingspan, length, motor, flight mode, company, price, designer and availability of cowls, canopies and retracts
*Includes appendixes on documentation, model magazines worldwide and international organizations
*Contains everything from peanuts to giant quarter-scale.

Next is an example of a page from the book:

Cancl (SA: 225, 256)

10½"	-	R	FF	CLEVE CD10B	$8.00	
12"	-	R	FF	POND 47D3	$4.25	(Ideal)
*12"	-	R	FF	FIKE	$6.95	(Negow)
14"	-	R	FF	POND 21C5	$3.25	(Model A/C)
14"	-	R	FF	POND 21C5	$3.25	(CL)
14"	-	R	FF	POND 37G5		Designer
14½"	-	R	FF			
15"	-					
*16"						

Price

Supplier

FF,CL or RC

Type of power

Wing span

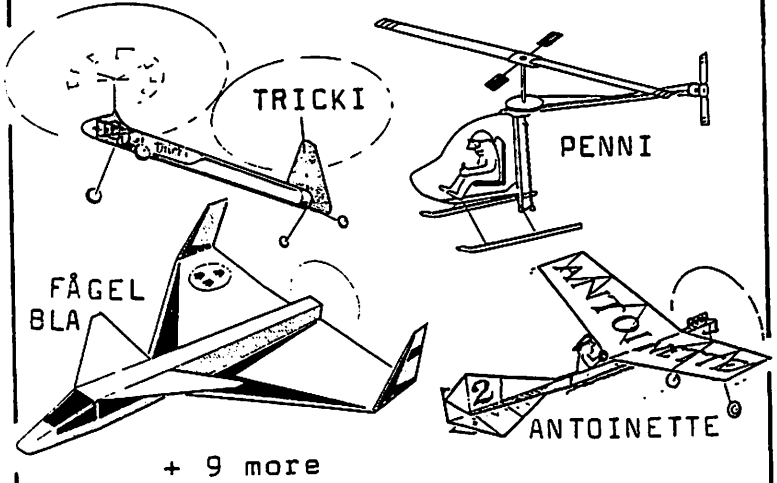
The book lists most of the designs by Alfery, Koutny and Fillon. But there must be more plans out there, which are not yet in the book. Please send your additions to John Fredriksen, 69 Flamingo Dr., Warwick, RI 02886, USA. The next edition will come out in 1994. As John says: "Any scale plan, no matter how obscure, will be included if I can locate it somewhere on this planet!".
The book can be obtained from Air Age Publishing, 251 Danbury Rd., Wilton, CT 06897, USA. Price $14.95 + $2.95 P&P.

Ackus models

I have received a nice letter from Rune Johansson, the man behind Ackus, the Swedish firm that markets beginner indoor model kits. He supplied other kits to be reviewed and a revised version of the Penni helicopter. This now has cambered and slightly twisted rotor blades. Reports in a future issue. See advertisement elsewhere in this issue.

His products are also sold in the UK by Ballards', 54 Grosvenor Road, Tunbridge Wells, Kent TN1 2AS, Great Britain.

Helped and inspired by Burkam,Hannan, Hattum, Scott and SIG Co.
I have made a new line of models suitable for INDOOR & OUTDOOR use.
They all fly beautifully and are simple to build with exception for PENNI & TRICKI who need more experienced builders.
ARE YOU INTERESTED IN GETTING VERSIONS FOR YOUR COUNTRY?
So far English (American) and Swedish instructions are ready but I am looking forward to getting YOUR help with translations into your language.



+ 9 more

THE KITS ARE SUITABLE FOR CLUBS BUT ALSO FOR INDIVIDUAL MODELLERS SINCE A LOT OF WORK HAS BEEN DONE ON PICTURES IN THE BUILDING INSTRUCTIONS.LOW PRICES BUT HIGH QUALITY!

PLEASE WRITE ME IF YOU WANT TO BUY OR GET MORE INFORMATION.
In Britain you can get most of the kits from BALLARD's.

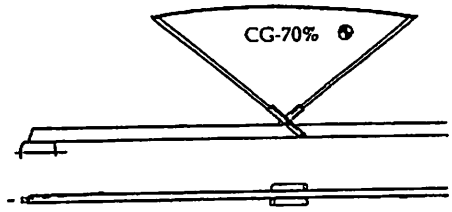
ACKUS, Rune Johansson, Åkersliden 3, 446 41 ÄLVÄNGEN, SWEDEN

TIPS

From Boyd Felstead (AUS):

When bracing a microfilm wing with nichrome wire, this wire has to applied under slight tension. Boyd hangs a weight on the wire consisting of a small brass washer attached to it with a piece of tape.

Boyd also passed on the following sketch of an interesting wing mount on Warren Williams Mini Stick. This mount prevents the transference of torsional twist of the motorstick to the wing. If (with a normal wing mount) the part of the stick between the wing posts twists, then warps are induced in the wing. Positive twist in the left wing and negative in the right (can be dangerous!).

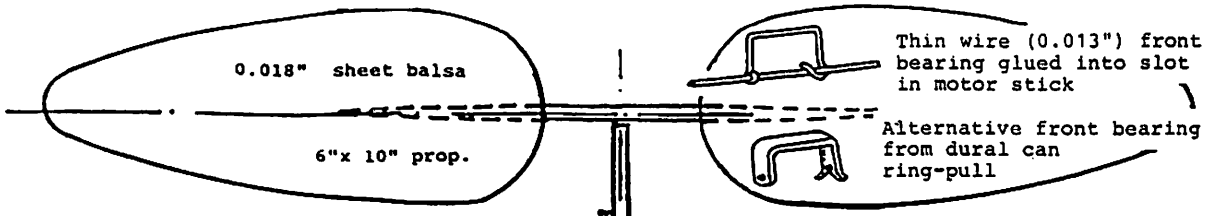


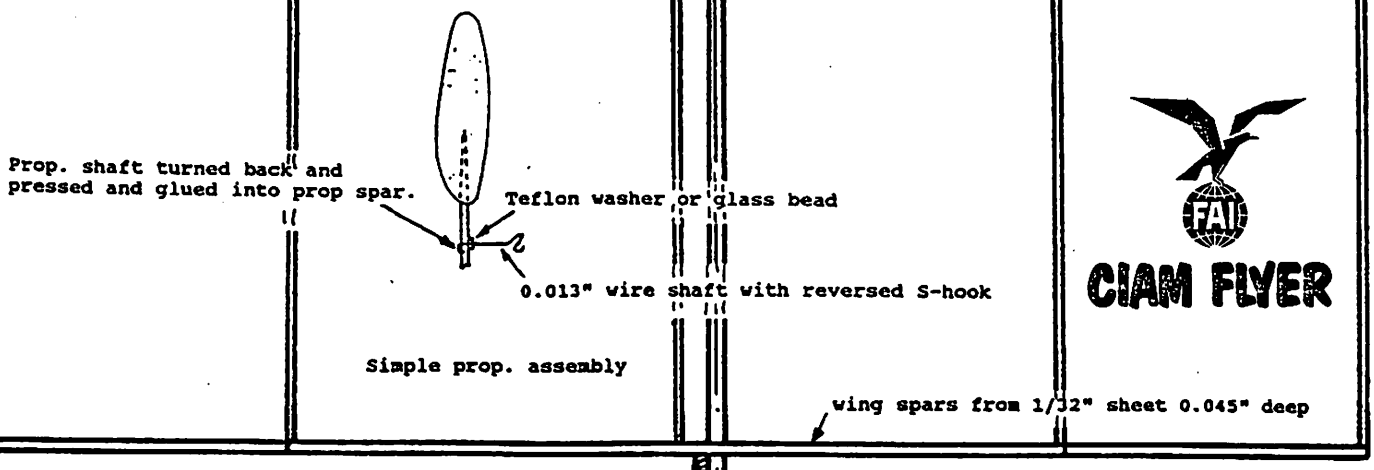
From Bill Henderson (CAN):

One of the problems we all face with indoor models is matching the propeller to the rubber motor and this means both prop diameter and prop pitch. This will usually mean making a series of props with different fixed pitches or using a prop on which the pitch is adjustable by the flyer. The latter is made by inserting the prop spars into a short length of paper tube that acts as the prop hub. Now you can adjust the pitch of each blade to the value that you want and then set it in place by using a narrow band of white glue over the paper tube/prop spar junction. Should you want to change pitch it is as simple as putting a little drop of water on the white glue on the band to lock the new pitch setting. There is a small weight penalty, but this is more than offset by the convenience. I have used this type of prop successfully on everything from Easy Bee to Bostonian, although the latter requires a much heavier paper tube to resist the force of hits when you are flying in low ceilings.

Butch Hadland Memorial Trophy

It has now been unanimously agreed by the BMFA Scale Technical Committee that a Butch Hadland Memorial Trophy will replace the present Peanut Trophy. This will be a most appropriate tribute to Butch who introduced this class to the UK and was such a masterful exponent. The design and manufacture is now cleared to go ahead but cannot start untill all donations have been received. Everyone who wishes to donate is urged to send their contribution to Laurie Barr as soon as humanly possible. You are reminded that the monies collected at various indoor meets previously has been for a donation to Cancer Research and not for the Memorial Trophy. Please put pen to paper NOW so that we can create a fitting tribute to a wonderful friend and magnificent modeller. Ideas for the design, and cheques, should be sent to Mr. L. Barr FSMAE, 4 Hastings Close, Bray, Berks. SL6 2DA, England. Tel. 0628 25595.



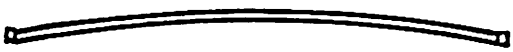


CIAM FLYER

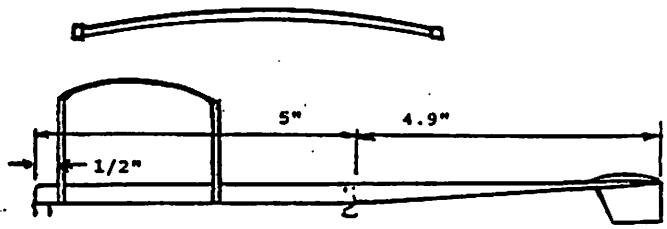
Wing has flat centre panel with 3/4" tip dihedral

Important: Wing posts are angularly misaligned so that when they are glued to the sides of the fuselage, they give about 3/32" WASHIN to the left wing centre panel.
The wing is offset 1/4" to left of fuselage to compensate for the left turning trim.

original used 1/32" strip rubber in a 13" loop to give 3 minutes duration in an 11' ceiling height.



Wing and Tail profiles (1/64"-1/32" sheet)



Wing posts 1.5"x 0.05"square

Set wing at zero incidence and adjust flight attitude with tail incidence.

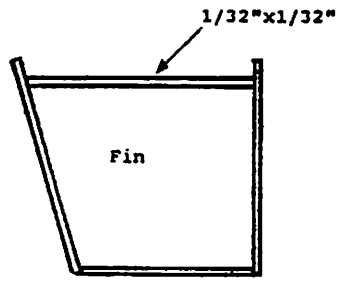
Motor stick and tail boom are from one piece of 1/16" or 3/32"sheet.Motor stick is 1/8" deep, tail boom is tapered in plan and elevation.

prop. bearing aligned to give 4° LEFT THRUST

Model knife



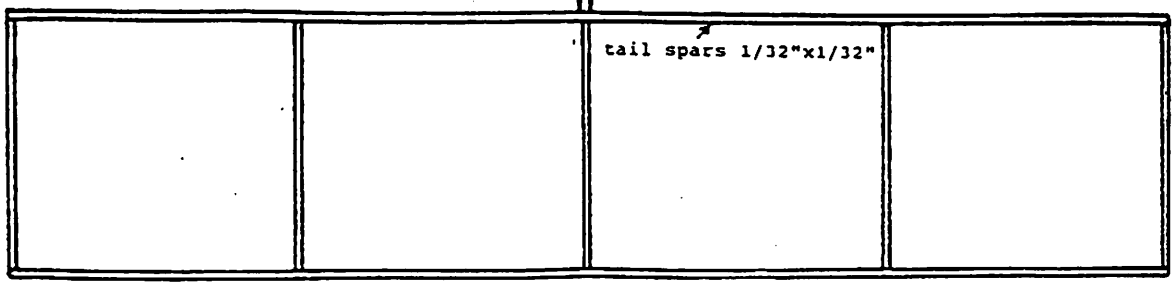
piece of razor blade



Left fin offset and tail tilt used to give left turn.

LIVING ROOM STICK INSECT

Brian Kenny



Courtesy of: FLYING MODEL DESIGNER & CONSTRUCTOR

RECORDS

47.2 + 47.6 Hand Launch Glider Cat. I

Stan Buddenbohm (USA) March 13, 1991

At first glance you may not be impressed by these times, but they are a tremendous achievement. It is not at all easy to achieve 30 sec. under 8 m ceiling, let alone 47! Stan has described his model, called Slow Poker, in a detailed article in Model Aviation June 92. Full size plans are available from Model Aviation, 1810 Samuel Morse dr., Reston VA 22090, USA. Price §2.00 (+§2.50 to non-US addresses). The model has a 620 mm span wing with flaps à la Upstart, but a more cambered airfoil. Tailplane is larger than usual to aid stability. The wing is mounted on a pylon. This pylon is taped to the fuselage during the trimming stage. Incidence is adjusted by sanding the underside of the pylon. Model weighs 6.2 grams.

35'43 F1D Microfilm Cat II World record

Andras Ree (HUN) June 30, 1991

Details of Andras' flight are now available:

R E C O R D D E S C R I P T I O N

In the Várszegi Memorial '91 Indoor Competition (organized by the Modelling Club of Technical University Budapest) in my forth official flight 35 minutes 43 seconds was recorded. It was more than 2 % higher than the valid world record figure in Cat.II. record class (32-b). The record has been confirmed by the FAI.

The site of the record flight is the hall of the central "K" building of Technical University Budapest, the place of two previous world records in 1970 (A.Ree) and 1981 (D.Orsovai) in the same record class. The certified official height of the hall is 14.90 meter which equals also the max. height of the site.

On June 30, 1991 (on the second day of the competition) I launched my INDOOREE'86 model at 11:50 a.m. After some slight and stalls the model climbed and reached the flat, glass covered ceiling after about 2 minutes 40 seconds. The model started to descend at about 23 minutes. It was needed only two slight steering in about 6 meter flight height by a stick. Than the model landed smoothly. The temperature in the hall was 25 °C (outside about 24°C, little cloudy) and the humidity was 55 % with very small drift, so the conditions were good. (Better than usually in this site, even I was four times over the existing Cat. II. world record in the past three years but with less than 2 % difference. Also a year before I did 36:20 but it was not accepted because we missed the 5 day preliminary claim prescription.)

The motor was made from a batch of pirelli from 1982 (1x4 mm) which we are using in warm air. The motor weighed 1.25 grams, the original length was 410 mm, it was the third flight with this rubber, two of them on the same day. I succeed to wound 1840 turns into the rubber than I launched with 1700 turns. After landing there was 170 turns left, so the average rpm was 42.8.

András REÉ

From Bill Warner's column in Model Aviation

Warning—Danger! Beware the vicious ROG! Formerly thought to be harmless with its ½-oz. weight and one loop of rubber, this model can do you serious damage, according to the large warning label on the new Sig Cub. Let me quote: "A model airplane gets very hot and can cause serious burns. Do not touch the motor during or after operation. Keep clear of the propeller. Remember that it's possible to lose control of a model airplane. Do not fly in locations where the model may hit people or damage property if loss of control occurs."

The label also goes on to caution me about model fuel being poisonous and flammable, and that I am likely to get fried if I get closer than the length of a football field to power lines. If their little pussycat of a Rubber stick model can do those terrible things flying at about 7 mph, just imagine what hazards some of their *big* models may pose. I shudder at the thought. I contacted Count Alex Pisana regarding a caution label he had made up several years ago, but which he never used. He gladly furnished me a reference copy:

"Warning! Danger! The Easy Bee can cause serious damage if you insist on walking about while looking up at it. You may trip over another modeler or step on his model, in which case loss of teeth may occur. Avoid ingestion of the model at all costs, as rubber lube has been known to have a powerful laxative effect. Keep well away from in-flight models if you have long hair. A wound rubber motor, no matter how small, can wind up enough hair to cause serious inconvenience. Climbing in gym rafters to retrieve stuck models can also cause minor bruises if one were to fall from any height over 30 ft. Final caution: Never fly your model when other people, or lawyers, are present."

So much for this month's safety lesson.

But.....

37'12 F1D Microfilm Cat. II World Record

Bob Randolph (USA) July 20, 1992

(Not yet approved by the FAI)

The weather in Seattle. Washington was sunny with some clouds and light winds of less than 5 MPH. The flying site was the Seattle Naval Reserve Training Armory with a smooth 37 ft. high ceiling. On both sides, 45° sloping beams and four hang down space heaters limited the usable width to 50 ft. Several offices on the upper level around the perimeter had open doors and windows causing some drift and turbulance. The temperature was 80° F. and rose to about 85-90° when the record flight was made.

My model was a stretched wing F1D with a 35" tapered wing. The propeller was a torgue actuated variable pitch type with Boron ribs and outline ,and adjustable high pitch and pre-load tension nylon screws.

After many quarter motor test flights to find the proper power and prop adjustment, three full motor official flights were made. Flight No. 1 was only 32:36 with many unused winds left. The Tan FAI rubber motor was shortened to 14½" for flight No. 2. This flight was aborted at about 6:30 when a balloon steer knocked the pin of one prop blade out of its keeper, resulting in unrestricted high pitch in that blade. The prop was repaired and the record flight motor winding started. Sixteen hundred winds were put into the 14½", .069" motor. Sixty winds were backed off for a launch torque of 37. The model climbed to the ceiling in three minutes and left the ceiling at approximately 6:25. Drift was bad at the top third of the site and numerous balloon steers were required to avoid the side beams and heater support cables. The cruise from about 28 ft. high to the floor was fantastic. The late afternoon sun made some hot spots on the floor and the turbulance resulted in 2 or 3 altitude losing stalls with only about 1 ft. of thermal altitude gain. The model settled to the floor at 37:12. Periodic propeller speed checks during the flight indicated the RPM varied from a low of 30 RPM to 36 RPM.

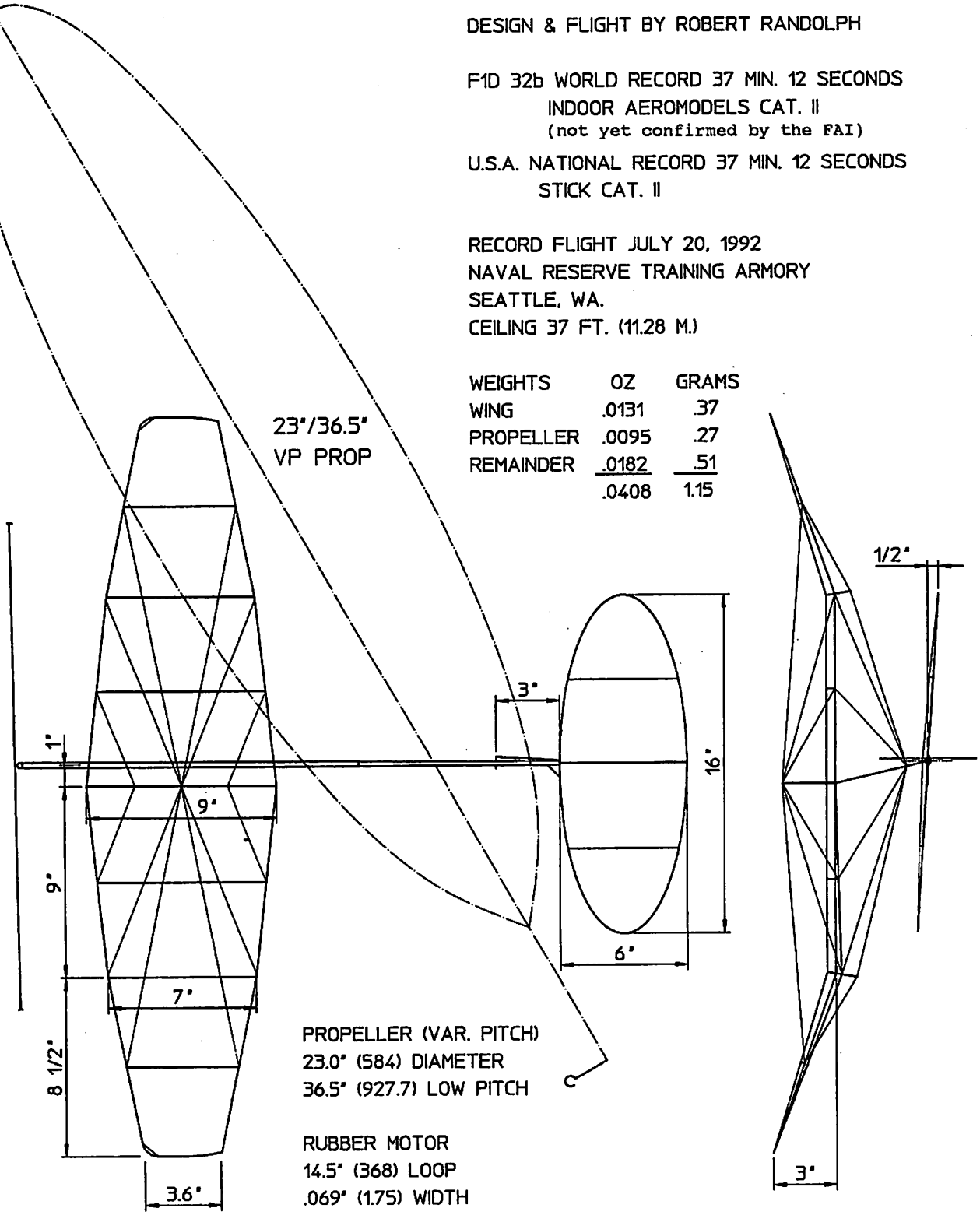
DESIGN & FLIGHT BY ROBERT RANDOLPH

F1D 32b WORLD RECORD 37 MIN. 12 SECONDS
INDOOR AEROMODELS CAT. II
(not yet confirmed by the FAI)

U.S.A. NATIONAL RECORD 37 MIN. 12 SECONDS
STICK CAT. II

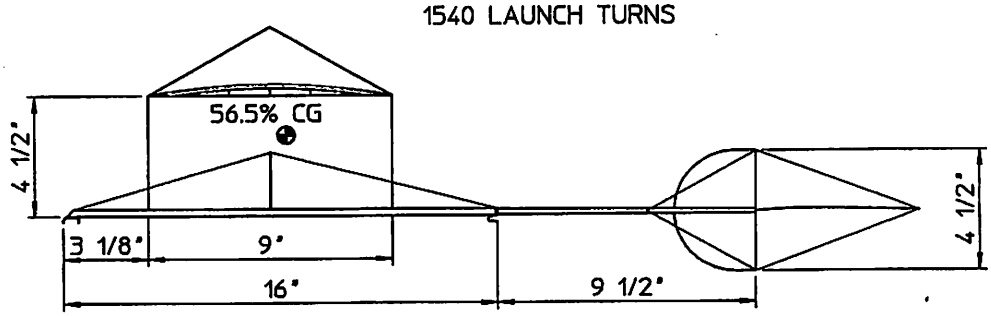
RECORD FLIGHT JULY 20, 1992
NAVAL RESERVE TRAINING ARMORY
SEATTLE, WA.
CEILING 37 FT. (11.28 M.)

WEIGHTS	OZ	GRAMS
WING	.0131	.37
PROPELLER	.0095	.27
REMAINDER	.0182	.51
	.0408	1.15



PROPELLER (VAR. PITCH)
23.0" (584) DIAMETER
36.5" (927.7) LOW PITCH

RUBBER MOTOR
14.5" (368) LOOP
.069" (1.75) WIDTH
.040" (1.02) THICKNESS
.050" (1.43) WEIGHT
1540 LAUNCH TURNS



SUPER CAT

News Indoor

And.....

34'18 F1D Microfilm Cat. I AMA Record

Bob Randolph (USA) Sept. 18, 1992

(Letter to Andras Ree (HUN))

25145 Lawton Ave.
Loma Linda,Ca 92354
September 23,1992

Dear Andras:

Thank you for explaining about your wing post. I made up some but didn't try them out for my Cat II attempt in July. Instead I modified two props with little balsa wedges, glued to the tips with a one eighth long length of boron glued to the top to absorb all the ceiling grinding. Although my props weren't set too well I did manage a 37:12 and the record is being processed. The ship was not a F1D model because it had a 35 inch span wing.

The site I got my World Record last year is not as good now because they installed vertical sound-proofing panels that lowered the ceiling 3 feet, but even worse are very catchey on the upper wing bracing wires (Kevlar). I have broken 6 or 7 wings so far. Anyway my friend back East, Tom Vallee, talked me into fielding a three man team to fly a mail contest with the Japanese. I knew that full motor flights in my Cat I site would require about 15 minutes at the top with many chances to break a wing on the panels. I think my weak cabanes would break if I used your system, so I made up a 11 inch post with boron glued on the front and back side, and glued this to the front post with the end just above the wing socket. After many ¼ and ½ motor test flights, I made up a 14 inch .070 motor for an official flight for the mail contest. It surprised me with a 33:15. The next flight was 34:18. While I had an AMA Sanction, I didn't have a Cat I Individual World Record Sanction, so no new World Record. It is a new US National F1D and Stick Record. If a simular post can keep the Cat II ship from breaking, I think I can do 38-40 minutres in Cat I with it later when I have all the right paperwork and observers present.

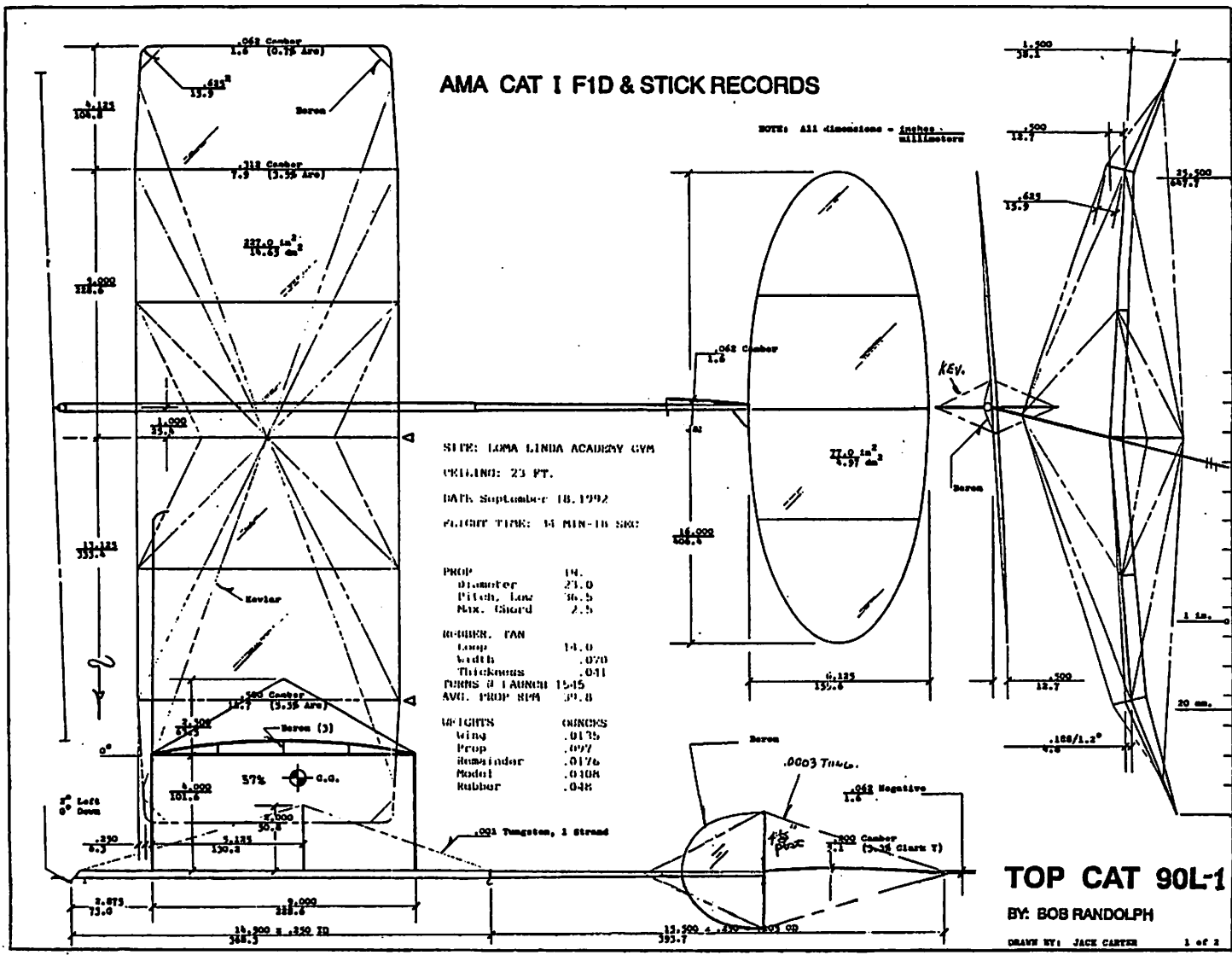
I am really more interested in a Cat III and IV attempts. I am still using Tan Rubber even though it means a 9 to 10 thousanths of an ounce weight penalty. For Cat III and IV I may use Pirelli.

My 34:18 prop works differently that my old Cat I and new Cat II props and evidently your record prop. It climbed to the top (23 ft.) in 3 minutes. Then, after about 8-10 taps it slowly descends about 6 or 8 feet before starting up again, touching the top at about 14 minutes. It continues to tap the top untill almost the 25 min. mark and takes almost 10 more minutes to reach the floor. Perhaps the best adjustment would be to almost reach the floor before starting the second climb and I will see if I can do this.

I seem to have written more than I had planned but I thought you would be interested.

Best wishes,

/s/
Bob Randolph



COLOFON

Indoor News is published at least three times a year and covers all types of indoor models, from peanuts to microfilm. Indoor News appears normally in March, July and November. Main language is English, but some of the articles will be in German. Texts can be sent in Dutch, English, German and French (I can read the latter two, but not write them). Texts can be sent on floppy disk (3½ or 5¼) in Wordperfect or ASCII format. I can make the drawings, if you are no draftsman. I prefer payment of subscriptions per six issues. Paying by Eurocheque, Postal Money Order or sending bank notes is free of handling charges, but other ways of payment add ±NLG 15,-. If possible pay by Giro (account number 4406860).

Editor:

Thedo André
Meijhorst 35-43
NL-6537JD Nijmegen
The Netherlands

Subscription:
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Europe NLG 30,-
Airmail USD 20,-

16th International Indoor Competition Liège/Flémalle

August 27-30, 1992

Photo's by Benno Sabel (G)



The Juniors from Model Club Kottenpark College Enschede (NL) and their teacher Ebele Schouwstra

F1D MICROFILM (5 competitors)

1. W. Nimptsch	D	20'45	13'06	28'14	27'36	27'47	10'17	58'51
2. T. André	NL	11'16	22'31	25'09				47'40
3. R. Czechowski	PL	6'48	7'45	26'31	14'41	20'31	16'00	47'04

F1D BEGINNER SENIOR (10 competitors)

1. W. Nimptsch	D	11'23	5'38	9'59				21'22
2. T. Merkt	D	3'23	9'40	9'32	10'00	9'20		19'40
3. F. Patat	F	9'09	1'58	8'11	3'09			17'20
4. H. Franke	D	4'07	6'49	8'57	6'43	6'45		15'46
5. E. Schouwstra	NL	2'50	7'12	3'42	5'54	5'58	6'10	13'22

F1D BEGINNER JUNIOR (13 competitors)

1. J. Wackers	NL	7'49	8'30	6'40	6'25	6'26		16'19
2. S. v.Egmond	NL	5'38	6'21	5'43	4'25	6'59		13'20
3. K. Huygelen	NL	4'06		2'16	6'14	6'27	5'50	12'41
4. O. Wevers	NL	4'36	5'17	5'24	6'17	4'53	5'17	11'41
5. M. Feringa	NL	4'53	5'10	4'03	3'52	5'22	6'01	11'23

EZB SENIOR (10 competitors)

1. T. de Vries	NL	9'20		5'05	6'50	8'36	11'44	21'04
2. R. Czechowski	PL	5'39	10'58	9'01	0'51	8'08	9'48	20'46
3. F. Patat	F	5'55	8'33	8'08	6'25	0'47	1'32	16'41
4. P. Severy	B	7'20	6'21	8'26	8'03	7'46	7'47	16'29
5. J. Kilpatrick	IR	7'55	8'16	3'40	4'27			16'11

EZB JUNIOR (2 competitors)

1. A. Green	GB	1'48	4'28	3'51	6'07	5'08	6'32	11'15
2. F. Glöckner	D	0'51	4'02	3'52	4'07	5'53	0'10	10'00

MICRO 35 PAPIER SENIOR (7 competitors)

1. W. Nimptsch	D	13'18	9'56	15'44	16'18			32'02
2. C. Bodin	F	8'59	8'33	8'10	0'44			17'34
3. M. Green	GB	6'04	6'26	7'42	4'23	8'11	6'04	15'53

MICRO 35 PAPIER JUNIOR (2 competitors)

1. F. Bodin	F	6'59	7'20	7'03	7'46	6'07	6'14	15'06
2. A. Green	GB	4'05	4'42	4'40	4'37	4'32	0'36	9'22

SAINTE FORMULE SENIOR (23 competitors)

1. W. de Joode	NL	4'14	4'16	4'24	4'32	4'20	9'08
2. C. Hanriot	F	4'29	3'56	4'35			9'04
3. W. de Joode	NL	0'44	1'50	4'21		4'30	8'51
4. C. Bodin	F	3'53	1'28	4'11	3'50	4'11	8'22
5. L. Koutny	CS	0'55	3'21	3'22	3'43	3'52	7'35

SAINTE FORMULE JUNIOR (12 competitors)

1. S. v.Egmond	NL	1'49	2'01	2'35	2'19	2'57	5'32
2. F. Haudrice	B	1'43	2'11	2'15	2'10	2'41	4'56
3. D. Lentink	NL	2'06	0'13	2'12	1'47	0'48	4'18
4. K. Huygelen	NL	1'40	1'59	1'31	2'08	0'50	4'07
5. A. Green	GB	1'25	1'37	1'32	1'32	1'40	3'17

PEANUT SENIOR (33 competitors/models)

			2 best flights		Pl. Stat.	Pl. Fl.
1. A. Alféry	CS	Avia BH-25J	89	90	1	7
2. L. Koutny	CS	Zlin Z.50M	99	100	12	4
3. C. Hanriot	F	Pottier 100TS	68	74	9	9
4. A. Alféry	CS	Aichi Seiran	53	54	5	17
5. A. Alféry	CS	Heinkel He.70G	113	111	20	3

PEANUT JUNIOR (5 competitors/models)

			2 best flights		Pl. Stat.	Pl. Fl.
1. F. Glöckner	D	Zlin Z.50M	29	40	2	2
2. F. Glöckner	D	Piper Cl.Wing	43	50	3	1
3. A. Melice	F	Fokker Dr.I	8	11	1	5

PISTACHIO SENIOR (8 competitors/models)

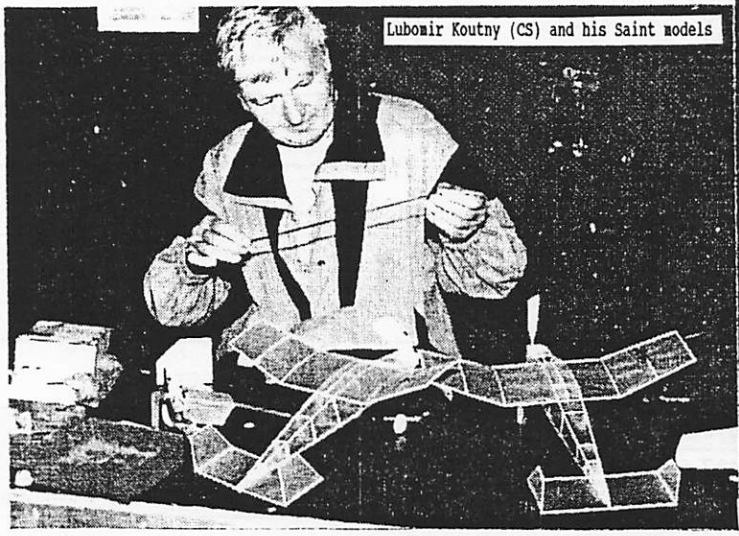
			2 best flights		Pl. Stat.	Pl. Fl.
1. A. Alféry	CS	Fike E	91	95	2	2
2. L. Koutny	CS	Sonerai	74	76	3	1
3. A. Alféry	CS	Drzewiecky Can.	52	51	1	5

CO2/ELECTRO SENIOR (9 competitors/models)

			Static	Best flight
1. A. Alféry	CS	Spad S XIII	1808.5	8'48
2. P. Stranik	CS	RAF BE2	1651	8'50
3. Z. Paduska	CS	Piper Cub	1544	6'31

RUBBER SCALE SENIOR (4 competitors/models)

			Static	Best flight
1. A. Alféry	CS	Bell P-39	1651	7'34
2. R. Boor	GB	Avro 560	1376.5	8'27
3. F. Mook	NL	Tiger Moth	1193.5	7'44



Lubomir Koutny (CS) and his Saint models



Michael Green (GB) with CO_2 ANEC

UNITED STATES INDOOR CHAMPIONSHIPS
JUNE 4,5,6,7-1992
MINI-DOME JOHNSON CITY

PEANUT SCALE - OPEN-
CD:P.KLINTWORTH

	SUBJECT	BEST MAX	2ND MAX	AVERAG BEST	SCALE POINTS	TOTAL POINTS
1 Don Slusarczyk	1911 Voison Hydroplane	142.8	132.0	137.4	148.32	285.72
2 Jack McGillivray	Isaac's Fury	136.7	135.0	135.9	136.71	272.57
3 Jim Miller	1911 Voisin	84.3	82.6	83.4	144.90	228.35

PEANUT SCALE - JR-SR-

1 Chris Sydor	Bebe Jodel	47.0	46.0	46.5	64.75	111.25

- AMA SCALE----------
CD:PHIL KLINTWORTH

	SUBJECT	BEST FLIGHT	SECOND FLIGHT	AVERAGE BEST 2	SCALE POINTS	TOTAL
1 Jack McGillivray	SE5	90	90	90.0	97.3	187.3
2 Dave Kees	36" Porterfield 1940	90	90	90.0	91.0	181.0
3 Wayne Trivin	Santos Dumont 14bis	90	90	90.0	87.0	177.0

KIT/PLAN SCALE-
CD: S.FINK & R.GANSER

	BEST FLIGHT	BEST (MAX)	2ND FLIGHT	2ND (MAX)	FIDELITY POINTS	CRAFT POINTS	BEST FLIGHTS	TOTAL POINTS
1 Paul Avery	99.0	90.0	99.0	90.0	54.0	36.0	180.0	270.0
2 John Blair	93.0	85.0	86.0	85.0	52.0	33.0	170.0	255.0
3 Richard Miller	110.0	78.0	79.0	78.0	49.0	29.0	156.0	234.0

- BOSTONIAN----
CD: DAN BELIEFF

	BEST FLIGHT	2ND FLIGHT	TOTAL BEST 2	CHAR	TOTAL
1 Richard Miller	04:30	04:24	08:54	1.08	576.72
2 Don Lindley	03:42	03:21	07:03	1.10	465.30
3 Stuart Weckerly	03:47	03:34	07:21	1.04	458.64

- FAI RUBBER---------
CD: A. TAGLIAFICO

	BEST FLIGHT	SECOND FLIGHT	TOTAL BEST 2
1 Richard Doig	00:38:02	00:37:13	01:15:15
2 Gary Underwood	00:32:29	00:32:17	01:04:46
3 Larry Loucka	00:32:23	00:31:23	01:03:46
4 Laurie Barr	00:31:27	00:31:16	01:02:43

EASY B - OPEN-----
CD: CLIF CLUPEPPER

1 Lawrence Coslick	22:48
2 Jerry Nolin	22:36
3 Stan Chilton	22:11

JR-SR

1 Peter Kearney	(SR)	16:43
2 Erick Sears	(JR)	13:35
3 Chris Sydor	(JR)	10:53

INTERMEDIATE STICK
CD: MIKE THOMPSON

1 Lawrence Coslick	29:34
2 Don Slusarczyk	29:32
3 Stan Chilton	29:28

-JR-SR---

1 Peter Kearney	(SR)	11:23
2 Chris Sydor	(JR)	07:15
3 Kris Forward	(JR)	00:03

PENNYPLANE - OPEN-
CD: PHIL KLINTWORTH

1 Howard Henderson	15:53
2 Lester Garber	14:43
3 Gordon Wisniewski	14:38

-JR-SR------

1 Peter Kearney	(SR)	12:11
2 Kris Forward	(JR)	10:45
3 Erick Sears	(JR)	07:29

LIMITED PENNYPLANE - OPEN
CD: WALT ERBACH

1 Jack McGillivray	13:
2 Bernard Hunt	13:
3 Paul Avery	12.

HELICOPTER-
CD DON LINDLEY

1 Tom Vallee	09:24.
2 Ron Ganser	05:46
3 John Marett	05:30

AUTOGYRO-----
CD: DON LINDLEY

1 Don Slusarczyk	11:27
2 Larry Loucka	00:00

- OLDTIMER STICK--
CD: TONY ITALIANO

	1
1 Don Slusarczyk	23:22
2 Chuck Markos	19:14
3 Wally Simmers	19:12

FEDERATION ROG--
CD: ED BURKE

1 Andrew Tagliafico	08:43
2 Jim Clem	07:51
3 Daniel Baird	05:48

-STATE TEAMS-

1 WASHINGTON	11:45
2 FLORIDA	09:17
3 TENNESSEE	08:56
4 NEW JERSEY	08:19
5 TEXAS	07:51
6 MINNESOTA	03:42
7 PENNSYLVANIA	00:00

HAND LAUNCH STICK -OPEN
CD: A. TAGLIAFICO

1 Richard Doig	39:13
2 Bernard Hunt	39:10
3 Don Slusarczyk	37:16

JR-SR

1 Peter Kearney	(SR)	16:32
2 Chris Sydor	(JR)	00:00

MINI STICK---
CD: MASON PLANK

1 Joseph Krush	10:20
2 Andrew Tagliafico	09:47
3 Stan Chilton	09:45

NO-CAL SCALE------
CD: JERRY NOLIN

1 Chuck Slusarczyk	06:05
2 Laurie Barr	05:10.
3 Lester Garber	04:58

HAND LAUNCH GLIDER - OPEN-
CD: DOUG BARBER

	BEST FLIGHT	SECOND FLIGHT	TOTAL BEST 2
1 Jim Buxton	71.1	69.2	140.3
2 Bernie Boehm	67.7	67.5	135.2
3 Michael Thompson	65.4	64.7	130.1

HAND LAUNCH GLIDER -SR--

1 Peter Kearney	45.6	44.8	90.4
2 Benjamin Knight	38.3	37.5	75.8

HAND LAUNCH GLIDER - JR

	BEST FLIGHT	SECOND FLIGHT	TOTAL BEST 2
1 Chris Sydor	52.1	49.7	101.8
2 Kris Forward	16.0	7.0	23.0

- CATAPULT GLIDER---
CD: DOUG BARBER

	BEST FLIGHT	SECOND FLIGHT	TOTAL BEST 2
1 Chuck Markos	79.7	76.8	156.5
2 Bill Schlarb	79.3	78.9	158.2
3 Ralph Schlarb	77.0	75.8	152.8

PEANUT SPEED---
CD: TOM VALLEE

	MPH
1 Chuck Markos	13.28
2 Mike Thompson	9.35
3 Randy Kleinert	0.00

UNLIMITED SPEED--
CD: TOM VALLEE

	MPH
1 Lawrence Coslick	13.75
2 Robert Romash	9.74
3 Clifford Culpepper, Jr.	0.00

ORNITHOPTER---
CD: DON LINDLEY

1 Joseph Krush	10:00
2 Joseph Coles	01:20

MANHATTAN CABIN--
CD: ABRAM VAN DOVER

1 John Marett	10:57
2 Walter Van Gorder	10:35
3 Chuck Markos	10:17

R.O.G. STICK---

1 Stan Chilton	15:35
2 Ron Ganser	14:45
3 Joseph Krush	13:18

- R.O.G. CABIN------
CD: G. WISNIEWSKI

1 Dan Belieff	22:56
2 Ron Ganser	22:08
3 Joseph Krush	17:21

RESULTS - 1992 CAN-AM INDOOR MEET
MAY 24, 1992 - UNIVERSITY OF BUFFALO, NEW YORK

EASY B
(Best Flight, Five Officials)

1	Jack McGillivray	16:49
2	Stu Weckerly	12:17
3	Larry Loucka	11:19

BLATTER 40

1	Mike Thomas	11:09
2	Bob Jennings	7:46
3	Vladimir Linardie	7:31

HIGH WING PEANUT SCALE
(Scale Points + Time)

1	Jack McGillivray	Fleet Canuck	77.25 + 59 = 136.25
2	Chris Brownhill	Lacey M-10	80.25 + 54 = 134.75
3	Greg Gallo	Cougar	74.50 + 58 = 132.50

LIMITED PENNYPLANE
(Best Flight, Five Officials)

1	Peter Kearney	10:14
2	Greg Gallo	9:45
3	William Henderson	9:27

INTERMEDIATE STICK
(Best Flight, Five Officials)

1	Larry Loucka	17:54
2	John Marett	15:47
3	Jack McGillivray	11:08

F.A.C. PEANUT SCALE
(Best Single Flight, Three Officials, + Scale + Bonus Points)

1	Jack McGillivray	Isaac's Fury	77.25 + 76 = 153.25
2	William Henderson	Bleriot-7	77.75 + 67 = 144.75
3	Dave Livesay	Mr. Smoothie	60.60 + 62 = 122.50

BOSTONIAN CABIN
(Charisma Factor x Sum of Two Flights, Five Officials)

1	William Henderson	1.18 x 440 = 519.20
2	John Marett	1.16 x 429 = 497.64
3	Richard Miller	1.16 x 398 = 461.68

FIVE CANADIAN RECORDS SET

Jack McGillivray	Open Easy B	16:49
Peter Kearney	Jr. Limited Pennyplane	10:14
Bill Henderson	Open Bostonian	3:41

Ian Kaynes kindly sent me the rules of the new indoor scale classes F4D, F4E and F4F. These are copies from a draft of the FAI Supplemental Rule Book, which will be reprinted by the AMA (probably in 1993). It is thus unconfirmed at this stage. The rules for F4E are equal to the F4D rules except for clause 6.5.1..

CLASS F4D - INDOOR FREE FLIGHT SCALE MODELS POWERED BY EXTENSIBLE MOTORS

6.4. General rules and standards for static judging as under 6.1. apply with the following amendment:
6.1.10. Minimum judging distances to read 1.5m and 0.5m instead of 3m and 1m. (Note: 6.1.6.a. shall also apply.)

6.4.1. General Characteristics

Maximum flying weight 150gm
Maximum wing loading: 15gm/dm^2
Motive power: extensible motor(s) only

6.4.2. Definition of an Official Flight

An official flight shall be recorded when the model has been airborne for 15 seconds.

6.4.3. Number of Flights

Each competitor shall have the opportunity to make a minimum of four flights.

6.4.4. Flying Time

A minimum period of 15 minutes shall be allocated for trimming before the competition begins and the competitor must be called 5 minutes before he/she is required to occupy the starting area. Failure to comply will result in loss of the flight. The model will be released upon instruction from the flight judges within a period of 3 minutes plus 1 minute for each additional motor. Only one release is permitted during the allocated time.

6.4.5. Judging for Flight Realism

6.4.5.1.	Take off (optional see 6.1.6.a.)	K=10
6.4.5.2.	Initial climb	K=8
6.4.5.3.	Descent and landing approach	K=12
6.4.5.4.	Quality of landing	K=11
6.4.5.5.	Realism of flight	K=24
	Total	K=65

6.4.6. Complexity Bonus

The flight shall be subject to a complexity bonus as listed in the following schedule. All bonuses are additive. The best flight score shall be factored by the appropriate total bonus to become the scoring flight.

		% bonus
a)	Propellers (on different thrust lines)	
	Single	0
	Two or more	15
	Note that each propeller must contribute significantly to the total thrust.	
b)	Undercarriage	% bonus
	Fixed (any configuration)	0
	Retractable (remains up for landing)	10
	Retractable (lowers again for landing)	20

6.4.7. Marking (Flight Points)

Each part of the flight, as defined in 6.4.5. will be awarded marks between 0 and 10 by each judge during the flight. These marks are then each multiplied by the appropriate K factor and aggregated before the bonuses are applied as described in 6.4.6.

6.4.8. Flight Score

The flight score shall be the aggregate sum of points awarded by the judges as described in 6.4.6. and 6.4.7.

6.4.9. Total Score

Add the points earned in 6.1.12. to the best flight score as defined in 6.4.8.

6.5. Class F4E - Indoor Free Flight Scale Models Powered by CO2 or Electric Motors

General rules and standards for static judging as under 6.1. apply with the following amendments:
a) 6.1.1. Minimum judging distances to read 1.5m and 0.5m instead of 3m and 1m. (Note: 6.1.a. shall also apply.)

6.5.1. General Characteristics

Maximum flying weight ..... 150 gm
Maximum wing loading ..... 15 gm/dm^2
Motive power: a) Commercially produced reciprocating motors driven by carbon dioxide gas with the gas storage tank carried on the model.
or, b) electric motors with the batteries carried in the model.

Entry-Level Microfilm Postal Contest Proposed

Encouraged by the success of the Mini Stick event, our group is considering sponsoring an international postal contest for a small, entry level, microfilm model.

I would like to get feed-back from indoor modelers. If there is sufficient interest, model specifications and contest rules will be announced this fall.

The model would be larger than Mini Stick, but small enough to be suitable for small, low-ceiling sites. Minimum weight would be around a gram. The model would be a monoplane and no fancy gadgets would be allowed. Microfilm would be allowed but not required. This should encourage beginners who need help getting down to competitive weight to try microfilm.

If you are interested please contact me.

Tom Vallee, 444 Henryton S., Laurel, Md. 20724

CLASS F4F - PEANUT FORMULA INDOOR FREE FLIGHT SCALE MODELS

6.6. General Rules

General rules and standards for static judging as under 6.1. shall not apply except for the following:
a) 6.1.7. number of models;
b) 6.1.9.2. name of entry.

6.6.1. Definition of Peanut Formula Scale Models

A Peanut Formula scale model shall be a reproduction of a heavier-than-air man carrying aircraft.

6.6.2. General Characteristics

Maximum dimensions: 33cm span or
23cm overall length excluding the propeller.
Motive power: Extensible motor(s) only.

6.6.3. Documentation

The minimum documentation is as follows:
a) a general arrangement drawing of at least 5cm wing span, plus one photograph of the aeroplane reproduced, or
b) a coloured 3-view to a minimum of 1/144th scale.

6.6.4. Flying Section

Each competitor is allowed a minimum of 4 official flights with two attempts per flight (an attempt is less than 5 seconds duration). The times of the longest two flights will be aggregated to form the competitor's flight score. Flights may be hand launched or from take off. If take off is successfully achieved, without pushing or similar assistance, then 10 seconds will be added to that flight time recorded.

6.6.5. Appearance Score

Models will be judged visually, in comparison with the documentation provided, by one or more judges. No measurements will be taken. Marks will be awarded as follows:

a) Workmanship	0 - 15
b) Complexity of colour and markings	0 - 10
c) Authentic details:	
many	5
some	2
none	0
d) Flying surfaces:	
all double covered	4
double covered wing but single covered tail	2
single sheet	1
single surface	0
e) type of covering:	
colour doped	9
clear doped tissue	5
undoped tissue	3
condenser paper	2
microfilm	0
f) Landing gear:	
scale length	3
slight enlarged	2
greatly enlarged or no documentation	1
none or retracted	0
g) Dihedral:	
scale	3
slight exaggerated	1
grossly exaggerated or no documentation	0
h) Stabiliser outline:	
scale	3
enlarged	1
grossly enlarged	0
i) Bonus points for complexity:	
low wing	9
biplane	9
triplane	15
autogyro	21
helicopter	27
flying boat or floatplane	9
scale number of wing ribs	2 per wing
scale number of tailplane ribs	1
scale number of rudder ribs	1/2
separate ailerons	1
separate rudder and elevator	1
other than square fuselage	1
wheel spats or pants	1
three dimensional pilot	1
exposed engine	1
j) Negative points for deviation from scale to assist flying performance:	
lengthening of nose or tail moment	2 each
moving wing back	2
simplifying fuselage cross-section	2
enlarging rudder	2
all other nonscale performance aids	2 each

The competitor's appearance score will be the sum of the marks awarded in 6.6.4.a) through 6.6.4.j).

6.6.6. Scoring

The order of marking in 6.6.3. and 6.6.4. will produce a "place" in the flying and appearance sections respectively. Each competitor's numerical "places" in the two sections are added. The lowest overall totals then determine the final overall placings in the competition. A fly off in which the realism of flight is the determining factor (marked to section 6.4.5.) will be held, if necessary, to break ties in the final placing of the leaders. In the event of a tie for appearance of flying the next lower position receives a "place" on greater than the total number of competitors ahead of him.