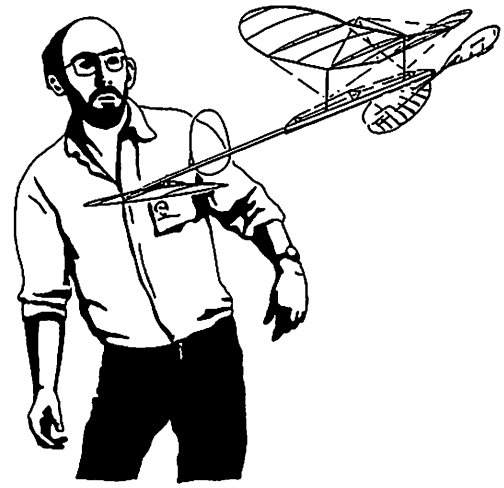
Indoor News



Issue 24 November 1993

F1D INDOOR EUROPEAN CHAMPIONSHIPS Brno - July 8-10, 1993

Report by András Reé (HUN)

Enclosed I send you the official results of the European Championships and also the results of the Open International in Easy Bee and Living Room Stick. I can also provide some details about the hall and the best flight of René Butty.

When you look at the results you will see that the site is quite good. It was the first real contest at this place. It is also a fact that it is a hard job to reach results like these. Because of the sunshine there was continuous drift in the hall - the direction depended on the height - but it was possible to steer up to the ceiling from the balconies (see photo and scetch in IN 21). In this respect it is better than hall "Z", which is situated not far from this "B" building. Hall "Z" has been used before several times. I have lost some good models there and there was no possibility to help.

The number of 30+ flights from round to round (2+6+8+6+10+9) was relatively low, but increased as we learned how to work in this hall. The total number of 30+ flights is only about 30%.

It was absolutely necessary to use VP or VD prop mechanisms to get a good result. 15 of the 23 competitors used them, 12 VP and 3 VD (Nore, Dihm, Englund). Only one could place between the VP and VD ships without gadgets, it was the chief organiser and best of the Czech team, our old friend Jiri Kalina.

Now about René's performance. The 44'06 flight is just a few seconds below the existing world record of Jim Richmond (44'43). He has used the new TAN 2 rubber and produced a unique flight path. After launching the model climbed up to 7-8 m, then slowly descended about 1-2 m. At about 18 minutes it started to climb again to about 16 m and levelled off at 30-32 minutes. The final slow descending was free of steering, but before he had to work with the balloon. You can imagine the applause after landing! The new rubber is very soft, which the following details explain. The motor weighed 1,5 g, a loop of 1,87 g/m strip, the unused length was about 400 mm. It was the second flight with this motor and it took 2300 turns. About 200 turns were backed-off and about 150 were left after landing. So the average RPM was about 44,2.

The motor data and pitch on the accompanying drawing of René's VP drawing are from the world championships last year in Wroclaw. Now the low pitch was 800 mm, the motor data were as given above.

The new TAN 2 rubber was sold on the spot by Kalina and was used also by Merkt. I also tried it for my last flight, but the prop diameter and low pitch were too large.

The individual honours of this contest were for René, now we had no chance to catch him. The

COLOPHON

Indoor News is published at least four times a year and covers all types of indoor models, from peanuts to microfilm. Texts can be sent in Dutch, English, German and French (I can read the latter two, but not write them). Please type your texts on 12,5 cm width. 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 to the recipient. Please bear the handling charges yourselves when paying by Eurogiro or with foreign cheques. The Eurogiro account number is 4406860.

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team competition was close. After the first day there was Poland, Finland and Czechia on the top. After round 5 the order was Germany, Poland and Hungary. Than by the end of round 6 Hungary, Poland and Germany, but Nimptsch was still in the air and finally he could prevent Hungary from winning third time.

Some more words about Jiri Kalina. At first many thanks to him on behalf of all of us for his work that made it possible to meet again at this E/Ch. You have to know, this contest was organised personally by him just with friends. The only official help was: **OK, let's do it!** Once more, thank you, Jirko!

F1D INDOOR EUROPEAN CHAMPIONSHIP
Brno - July 8-10, 1993

Seniors

Place	Name	Country	1.	2.	3.	4.	5.	6.	Total
1.	René BUTTY	SWI	15:09	41:32	44:06	11:41	29:24	9:48	85:38
2.	Thomas MERKT	GER	29:57	32:30	35:17	0:00	37:41	37:03	74:44
3.	András REÉ	HUN	11:04	6:30	9:55	35:41	37:14	29:34	72:55
4.	Werner NIMPTSCH	GER	12:29	5:11	26:48	33:33	31:37	37:30	71:03
5.	Pentti NORE	FIN	24:52	32:46	35:33	34:27	26:30	32:32	70:00
6.	Edward CIAPALA	POL	12:16	29:19	35:08	8:18	29:22	34:15	69:23
7.	Jan DIHM	POL	32:37	1:14	32:48	33:15	35:09	22:36	68:24
8.	Leif ENGLUND	FIN	22:08	32:25	26:50	33:42	34:40	10:30	68:22
9.	Dezsö ORSOVAI	HUN	4:58	10:01	31:51	9:20	25:45	35:39	67:30
10.	Jiří KALINA	ČR	7:20	30:01	31:45	31:19	31:50	33:10	65:00
11.	Corneliu MANGALEA	ROM	13:16	28:46	11:56	25:37	31:40	32:55	64:35
12.	Sylwester KUJAWA	POL	31:24	29:02	20:00	18:53	31:33	32:18	63:51
13.	Ferenc BAKOS	HUN	5:51	27:13	30:59	28:22	23:52	31:14	62:13
14.	Aurel POPA	ROM	0:42	21:54	1:08	4:11	32:22	29:45	62:07
15.	Lutz SCHRAMM	GER	0:29	34:11	0:00	2:48	25:32	23:41	59:43
16.	Nicu BEZMAN	ROM	15:01	9:30	15:59	11:23	30:00	29:43	59:43
17.	Jaroslav JIRÁSKÝ	ČR	5:39	27:12	9:16	29:19	27:10	17:07	56:31
18.	Karel BRANDEJS	ČR	27:04	24:18	6:43	10:16	25:32	4:49	52:36
19.	Jean-Francis FRUGOLI	FRA	8:40	22:10	13:59	18:48	26:03	24:54	50:57
20.	Harro EROFEJEFF	FIN	24:40	22:29	25:15	22:49	16:48	20:24	49:55
21.	Robert CHAMPION	FRA	20:43	23:50	24:34	12:35	22:33	23:03	48:24
22.	Karol VINŠ	SR	8:11	6:22	16:47	20:14	21:58	22:41	44:39
23.	Guy COGNET	FRA	5:53	17:47	20:00	19:48	20:39	20:49	41:28

Juniors

Place	Name	Country	1.	2.	3.	4.	5.	6.	Total
1.	Maciej KCZLOWSKI	POL	14:32	8:04	19:11	8:54	15:27	26:36	45:47
2.	Jakub BIZIEL	POL	7:35	22:02	21:23	16:12	18:52	19:23	43:25
3.	Andrej STACHNO	POL	11:30	8:26	20:57	6:49	18:18	0:00	39:15
4.	Jan JIRÁSKÝ	ČR	9:27	8:13	10:45	6:35	15:58	17:25	33:23

Teams - Seniors

Place	Country	1.	2.	3.	Total
1.	GERMANY	71:03	59:43	74:44	205:30
2.	HUNGARY	62:13	67:30	72:55	202:38
3.	POLAND	68:24	63:51	69:23	201:38
4.	FINLAND	68:22	49:55	70:00	188:17
5.	ROMANIA	62:07	64:35	59:43	186:25
6.	CZECH REPUBLIC	56:31	52:36	65:00	174:07
7.	FRANCE	41:28	50:57	48:24	140:49
8.	SWITZERLAND	85:38	0:00	0:00	85:38
9.	SLOVAK REPUBLIC	44:39	0:00	0:00	44:39

Teams - Juniors

Place	Country	1.	2.	3.	Total
1.	POLAND	43:25	45:47	39:15	128:27
2.	CZECH REPUBLIC	33:23	0:00	0:00	33:23

OPEN INTERNATIONAL INDOOR CONTEST
Brno - July 11, 1993

F1L - EZB

Place	Name	Country	Total
1.	Ryszard CZECHOWSKI	POL	26:47
2.	Dušan SEDLÁR	SR	25:06
3.	Sylwester KUJAWA	POL	24:26
4.	Ferenc BAKOS	HUN	24:24
5.	Jaroslav JIRÁSKÝ	ČR	23:02
6.	Károly BÍRÓ	HUN	22:15
7.	Bruno WÄCHTER	GER	19:10
8.	Karol VINŠ	SR	18:47

LIVING ROOM STICK

Place	Name	Country	Time
1.	Jiří KALINA	ČR	7:38
2.	Werner NIMPTSCH	GER	6:57
3.	Bruno WÄCHTER	GER	6:42
4.	Jan JIRÁSKÝ	ČR	6:20
5.	Sylwester KUJAWA	POL	5:54
6.	Jean-Francis FRUGOLI	FRA	5:28
7.	Karol VINŠ	SR	3:06

FAI Jury: Pierre CHAUSSEBOURG (France), Pawel WLODARCZYK (Poland), Otakar ŠAFFEK (Czech Republic)

Contest Director: Antonín TVARŮŽKA

RECORDS

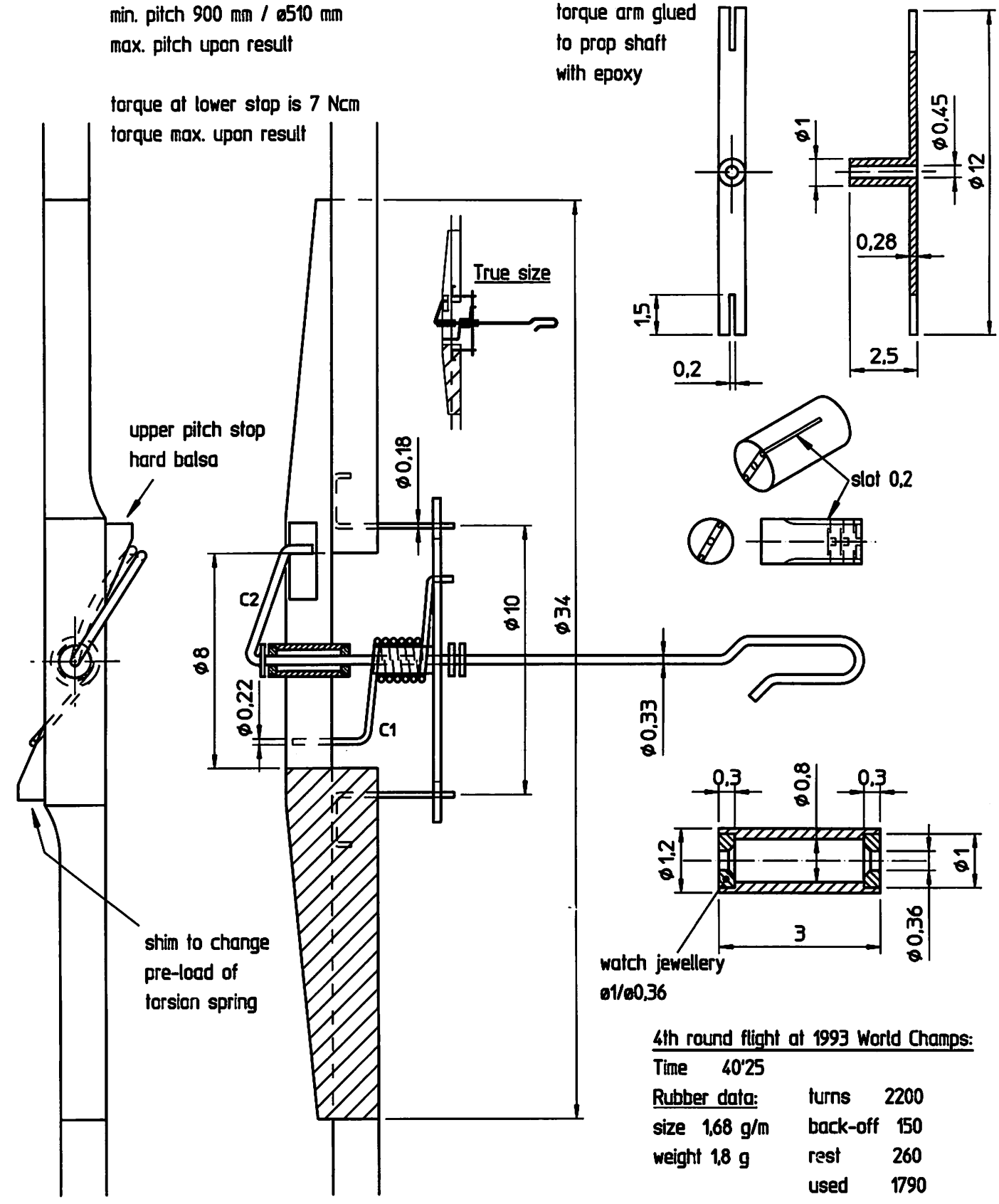
34'51 F1D Microfilm Cat. I World Record
Satoshi Kinoshita (JAP) September 27, 1993
Satoshi first improved on Rainer Lotz' current record on August 14 with a flight of 34'20. On Sept. 27 he raised the record to 34'51 at YoYoGi. He used a VP prop equipped 65cm Microfilm model. A plan of the prop is in this issue and a plan of the model will be in the next. There is as yet no official approval by the FAI.

45'14 F1D Microfilm Cat. III World Record
Bob Randolph (USA) September 26, 1993
It's becoming a habit: Bob broke a world record again. This record was flown in a 80 ft. (24,4 m) hangar at Norton AFB. He used a modified Super Cat with a 22/34 VP prop, using new Tan II rubber. FAI approval is pending.

28'33 EZB (USA rules) Cat. IV World Record
Bernard Hunt (GB) June 20, 1993
Bernard made this unofficial world record flight in Shed No.1 at Cardington. See Free Flight News 9310 for details of the flight and the model.

1994 WC USA F1D-TEAM

Bob Randolph reports: As the result of the Akron Team Selection Finals on Sept. 4-6, the 1994 U.S. team will be Steve Brown, myself and Cesar Banks. Of the four California flyers entered, we placed 1-4, with Steve, myself and Bob Gibbs (4th) all making personal best F1D flight times.

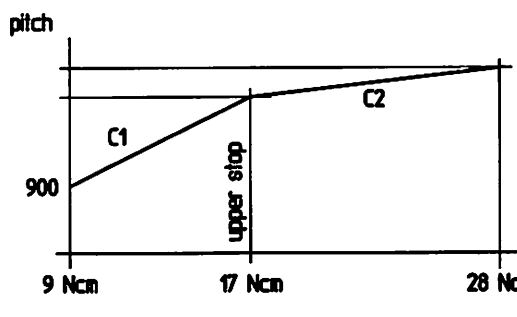


4th round flight at 1993 World Champs:

Time 40'25

Rubber data:		turns	2200
size	1,68 g/m	back-off	150
weight	1,8 g	rest	260
		used	1790
		RPM	44,3/min.

Weight of prop: 0,19 g



C1 = stiffness constant of torsion spring

C2 = stiffness constant of torsion part of prop shaft

F1D Variable Pitch Prop

by René Butty (SWI)
F1D European Champion 1993

Drawn by Thedo André

DIARY

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

20-/26 Sept 1994 **Indoor World Championships,**
Slanic Federatia Romana de Modelism,
Romania Str Vasile Conta 16 Sect 2, 70139 Bucarest, Rumania. Tel. 40 131 20160, fax 40 131 20161

1994 Indoor World Championships

The 1994 Indoor World Championships will take place in the saltmines in Slanic, Rumania. There will be a world championship for seniors and juniors. The saltmine measures 64m high, 33m wide and 118m long. The mine is well thermo-insulated and draught-free. The temperature is constant at 12-13°C and rel. humidity is 70%.

Time schedule:
Sept 20 - arrival, registration
Sept 21 - practice, technical meeting
Sept 22 - opening ceremony, rounds 1 & 2
Sept 23 - rounds 3 & 4
Sept 24 - rounds 5 & 6
Sept 25 - reserve day, award ceremony
Sept 26 - departure

Entry fees: seniors, team managers $150, juniors $75, supporters $40. Accommodation: $35/pers/day x 6 days = $210 in motel, meals in restaurant, local transport. Banquet $15/pers. Information: Federatia Romana de Modelism, Str Vasile Conta 16 Sect 2, 70139 Bucarest,Rumania. Tel. 40 131 20160, fax 40 131 20161.

Living Room Stick Postal Contest 1993

		time	height	points		
1.	R. Lotz	GER	6'24	7.48	822.27	Overall Champ
2.	M. Thomas	CAN	7'25	18.83	761.03	1st.Int.
3.	W. Trivin	USA	5'52	7.83	747.12	2nd.Int.
4.	D. Robelen	USA	7'16	21.00	723.59	3rd.Int.
5.	J. O'Donnell	UK	5'23	8.46	673.31	1st.UK
6.	Y. Sugi	JAP	7'11	26.09	672.30	
7.	Y. Sugi	JAP	7'27	29.52	672.22	
8.	R. Randolph	USA	6'48	23.00	659.99	
9.	R. Gibbs	USA	6'43	23.00	651.90	
10.	D. Yates	UK	5'11	8.46	648.30	2nd.UK

58th Polish Indoor Championships

Poznan, July 16-18, 1993

Seniors				
1. S. Kujawa	Poznan	30'15	30'08	**60'23**
2. E. Ciapala	Katowice	28'59	30'01	**59'00**
3. J. Dihm	Krakow	26'31	24'30	**51'01**
4. R. Woldanski	Poznan	24'26	24'55	**49'21**
5. R. Czechowski	Krakow	23'34	24'55	**48'29**
6. P. Fronckiewicz	Wroclaw	19'37	19'29	**39'06**
7. R. Majewski	Bydgosz	18'47	19'41	**38'28**
8. J. Sierko	Bydgosz	11'13	17'10	**28'23**
Juniors				
1. K. Mlozynski	Bydgosz	22'27	19'18	**41'45**
2. D. Karpatsopoulos	Poznan	18'15	16'13	**36'25**
3. G. Gill	Bydgosz	11'47	20'54	**32'41**
4. M. Kozlowski	Bydgosz	12'20	20'09	**32'29**
5. J. Biziel	Wroclaw	15'29	16'48	**32'17**
6. A. Stachno	Wroclaw	15'43	15'46	**31'29**
7. A. Szukala	Poznan	14'10	17'17	**31'27**
8. K. Czapla	Poznan	13'53	12'32	**26'25**
9. M. Trzpis	Bydgosz	12'32	12'15	**24'47**
10. M. Zadrusinski	Bydgosz	13'03	11'23	**24'26**

平成５年度　ＦＩＤ　日本選手権　成績表　４月２５日、２６日　東京　夢の島体育館

'93 F/D JAPAN CHAMP 25-26 APR At YUMENOSHIMA (Cat.II)

日本模型航空連盟

	No.	氏名	JANo.	1R	2R	3R	4R	5R	6R	成績	順位
H.FNOMOTO	1	榎本 英世	33F00255	7'50"	15'33"	21'17"	28'53"	26'48"	14'40"	55'41"	4
S.NONAKA	2	野中 繁吉	33F00111	17'21"	8'50"	9'56"	12'14"	9'00"	3'57"	29'35"	10
Y.ICHIYAMA	3	市山 洋一	27F00314	25'09"	24'59"	———	7'43"	21'19"	25'01"	50'10"	5
Y.TANAKA	4	田中 泰孝	33F58055	9'57"	20'05"	17'40"	12'35"	'13"	18'31"	38'36"	7
T.OKADA	5	岡田 利昭	53F29412	20'00"	30'39"	12'25"	15'43"	17'28"	28'04"	58'43"	3
I.HAMADA	6	浜田 勲	53F00815	不参加							
S.KINOSHITA	7	木下 哲	34F37955	32'22"	30'35"	8'27"	32'51"	34'12"	25'54"	67'03"	2
T.TAKEUCHI	8	竹内 淑朗	33F01733	13'53"	18'10"	20'17"	5'59"	7'19"	17'50"	38'27"	8
M.MISAWA	9	三沢 正敏	34F58469	15'12"	17'09"	19'26"	'47"	1'39"	4'32"	36'35"	9
K.KIHARA	10	木原 一正	34F01226	6'54"	30'08"	35'17"	12'33"	6'12"	33'08"	68'24"	1
S.TANAKA	11	田中 進	53F20293	7'25"	'57"	12'04"	'31"	19'35"	19'59"	39'34"	6
R.HARADA	12	原田 良介	34F01329	7'29"	4'11"	4'37"	'11"	4'02"	6'22"	13'51"	11

★KAZUMASA KIHARA 35'.17" JAPAN RECORD (CAT II)

写文責　茂手木

17th International Indoor Competition Liège
August 26-29, 1993

Report by David Lentink (NL)

After an eventless journey we, members of Ebele Schouwstra's school modeling club from Enschede (Holland), arrived on wednesday evening at the camping of Tilff. Tilff is a little town 6 km from the "Country Hall" of Liège where the renowned "Flémalle" competition is now taking place. We were pleasantly surprised to find new and very modern sanitary provisions at the camp site. No "survival" elements this time and this feeling of "luxury" was there again when we entered the hall next morning. We received a nicely made badge with our names on it and the title "competitor"...it's getting serious! The first two days were mainly of interest to duration flyers, whereas the third and fourth day are for the scale flyers. As with every competition one comes for the battle, the other for the fun. This could be easily deduced from the flight patterns, the times scored and the models .....it all added to the fun!

There were slightly less entries in the duration classes and Peanut, but more in Open Scale and Pistachio. Only 3 entered F1D Microfilm. That is a pity as this hall is very good for microfilm flying. This time Thedo André beat Werner Nimptsch with his now old, but VD-prop equipped models. In the Micro 35 class Werner was way ahead of the competition and he also did very well in F1D-Beginner with flights of 13+ minutes. Standards in EZB were low. I saw a peculiar EZB with the wing below the motorstick, highly asymmetric, it flew well but not for long.

In Junior F1D-Beginner the competition was very close. But it started really bad because of this @?*! rope hanging from the ceiling which particularly liked the more advanced F1D-Beginners... On the first day it catched my brand new model (my first serious design attempt), on the next day it caught Jeroen Wackers' also brand new model. Only a few remnants swirled down...

Now on to this lovely and strange compromise class "Sainte Formule". It is not a scale class and it is not a real duration class. Yet the competition is very serious. Times of practice flights were kept secret. We all feared Cristophe Hanriot's new secret weapon. It had a lifting body and resembled a battle carrier... But its flying capacities proved not to be sufficient to reach the top 3. Wijnand de Joode quickly and routinely put in the best flights. This time he used a canard version of his Guppie design. He beat 5 minutes for the first time and announced his resignation from this class. On the last day Cedric Bodin flew himself into second place. Third place was for your reporter. My frantic efforts to improve on my test flights (the best was 5'38) were in vain. But I learned my lesson: glue the prop blades after a good flight to fix the pitch.

The Junior Sainte Formule results were a bit weird to us. Jeroen Wackers, who usually beats the juniors as well as the seniors, placed only third. More surprisingly Durk Steenhuizen excelled himself by placing second. But Florent Bodin did 3'28 and won deservedly. Sainte Formule is besides Scale the most popular class here and it was particularly nice to see so many of them in the air at one time.

I can not give you much decent information about the scale classes as I am not a specialist. I am really fond of those tiny Pistachio's and was most impressed by the "canard-water-biplane" (Voisin Hydroplane 1911) by Sugimoto. Siegfried Glöckners flying wing Storch IXb flew even better than last year. It is interesting to note the excellent quality of the junior Peanut models (and the dominance of yellow Piper Cubs). Entries in Open/Electro scale doubled those of last year. We were impressed by the models of Rainer Gaggl from Austria and quick-ly nicknamed him the "european Alféry". He showed us his incredible 0.75 mm^3 CO_2 motor which, mounted on a small indoor model, made flights of up to 6 minutes!

This year the Scale competitions were very strictly organised. No practice flights were allowed on sunday. Each competitor was called forward to make his flight in front of the judges and of the public on the tribunes. Each flight was appropriately commented through the sound system. But seeing only a single model in the air time after time made me a bit bored in the end (T.A.: guess that's his youthly age... David is 18 years old). The Czechs dominated the field taking first place in each scale class.

The competition was concluded with the usual extended distribution of all the well-earned prizes (and kisses). Benno Sabel received a nice reward to celebrate the fact that he entered this competition for the 15th time! Reg Boor presented organiser Fernand van Hauwaert with a very beautiful Peanut model. We too thank him very much for organising this wonderful flying "feast" year after year. Till next year in Liège!

17th International Indoor Competition Liège

August 26-29, 1993

F1D MICROFILM (3 competitors)

1. T. André	NL	25'46		29'10	27'50				57'00
2. W. Nimptsch	D	28'36	26'45	19'21	17'26				55'21
3. C. Hanriot	F	10'36	11'14	1'40	5'12	9'56			21'50

F1D BEGINNER SENIOR (11 competitors)

1. W. Nimptsch	D	13'11	13'04						26'15
2. P. Keller	CH	11'41		7'30	8'23	9'16			20'57
3. A. Klinck	D	9'10	3'41	6'02	8'53	8'50	10'33		19'43

F1D BEGINNER JUNIOR (6 competitors)

1. J. Wackers	NL	5'10	5'38	5'51	6'48	5'57	6'32		13'20
2. A. Green	GB	2'19	5'30	4'28	6'27	3'48	3'16		11'57
3. D. SteenhuizenNL		5'56	5'32	5'50	4'29	5'56	5'18		11'52

F1L EZB SENIOR (9 competitors)

1. N. Bernard	B	8'02	8'11	9'19	1'11				17'40
2. R. Deschamps	B	5'12	7'04	7'28	7'30		6'18		16'58
3. R. Boor	GB	5'58	8'12	8'17	7'33	7'56	8'33		16'51

F1L EZB JUNIOR (2 competitors)

1. A. Melice	B	3'20	5'05	3'35	4'27	6'26	6'23		12'49
2. A. Green	GB	3'53	1'01	3'35	4'33				8'26

MICRO 35 PAPIER SENIOR (5 competitors)

1. W. Nimptsch	D	15'58	15'44						31'42
2. A. Klinck	D	8'18	8'16	10'24	11'00	9'03	12'10		23'10
3. E. D'Hondt	B	4'49	6'58	6'56	7'47				14'45

MICRO 35 PAPIER JUNIOR (3 competitors)

1. F. Bodin	F	8'09	9'39						17'48
2. A. Green	GB	5'10	4'27	7'06					12'16
3. L. v.Caneghem	B	0'38	0'36	0'29					1'14

SAINTE FORMULE SENIOR (26 competitors)

1. W. de Joode	NL	5'08	4'39	3'17	3'57	0'14	13'44		
2. C. Bodin	F	3'42	4'12	4'26	4'23		13'01		
3. D. Lentink	NL	4'25	2'34	4'05	3'16	1'58	11'46		

SAINTE FORMULE JUNIOR (12 competitors)

1. F. Bodin	F	2'06	2'22	3'28			7'56		
2. D. SteenhuizenNL		2'57	2'50	1'50	1'54		7'41		
3. J. Wackers	NL	0'52	1'35	2'06	1'21	3'10	6'51		

PEANUT SENIOR (25 competitors/models)

			2 best flights		Pl. Stat.	Pl. Fl.
1. P. Stranik	CS	Tipsy Junior	88	86	4	4
2. L. Koutny	CS	Savoia SM.51	76	41	2	10
3. L. Koutny	CS	Zlin 50M	93	76	10	6

PEANUT JUNIOR (2 competitors/models)

			2 best flights		Pl. Stat.	Pl. Fl.
1. F. Glöckner	D	Piper Cl.Wing	57	55	1	1
2. J. Wackers	NL	Piper J3 Cub	45	39	2	2

PISTACHIO SENIOR (11 competitors/models)

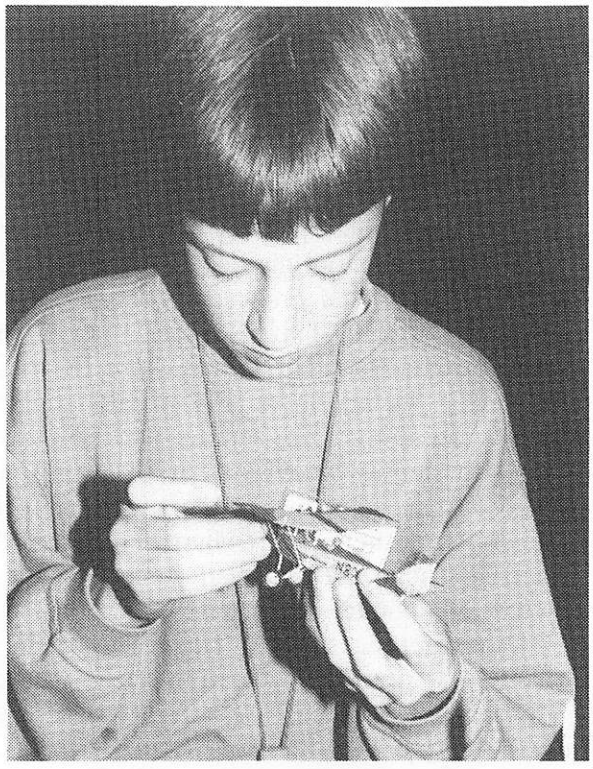
			2 best flights		Pl. Stat.	Pl. Vl.
1. L. Koutny	CS	Soneray	80	78	3	1
2. J. Sugimoto	J	Voisin Hydropl.	45	41	1	5
3. G. Brendel	NL	Jodel D9 Bébé	57	43	5	4

PISTACHIO JUNIOR (1 competitor/model)

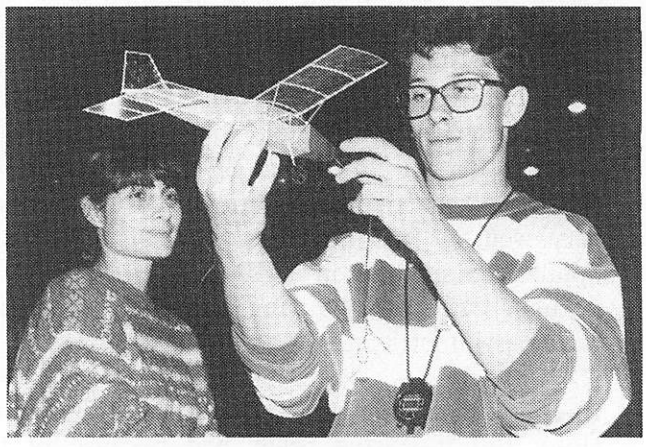
			2 best flights		Pl. Stat.	Pl. Fl.
1. J. Wackers	NL	Pietenpol	16	5	1	1

OPEN/CO2/ELECTRO SENIOR (17 competitors/models)

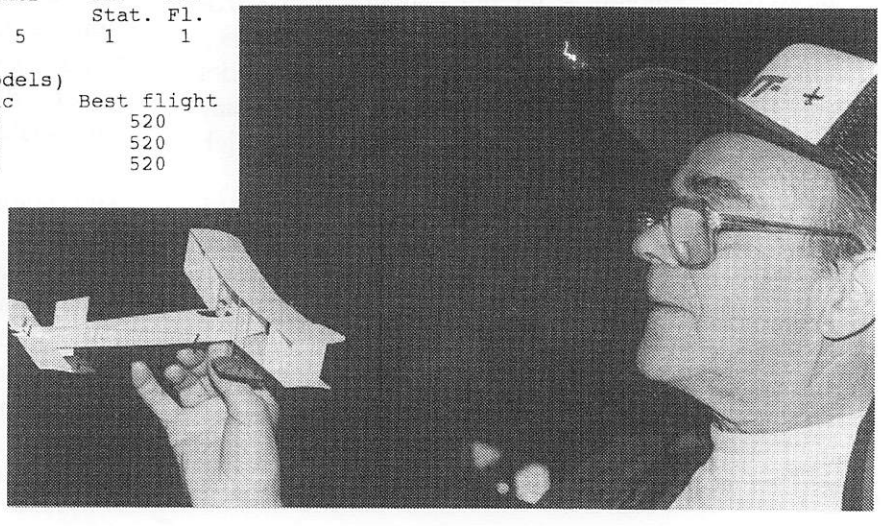
			Static	Best flight
1. P. Stranik	CS	BE2C	1589	520
2. F. Mook	NL	Tiger Moth	1483	520
3. A. Halstead	GB	Turbo Porter	1477	520



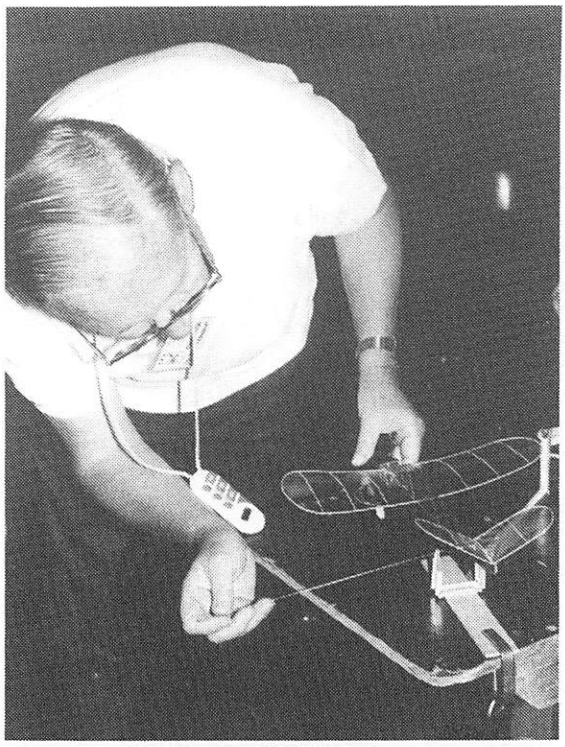
Jeroen Wackers' Pietenpol spans only 16cm. He jumped in the air when it finally flew (like a fly drowned in wodka).



Cedric Bodin (F) and Sainte Formule model



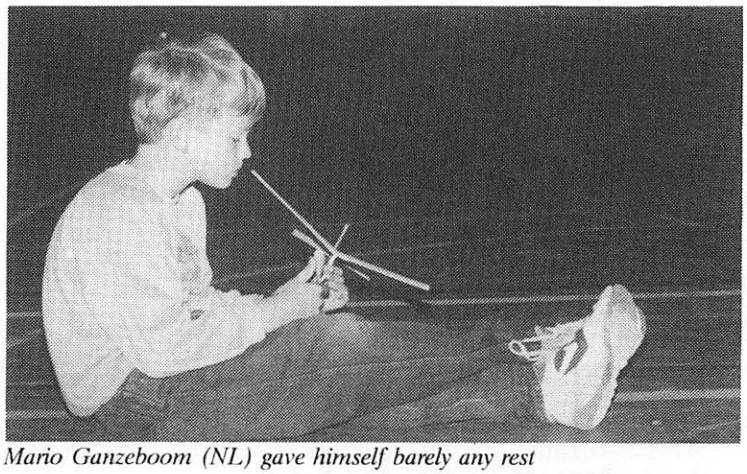
Benno Sabel (D) proxy-flew this wonderful Pistachio Voisin Hydroplane built by Sugimoto (Japan)



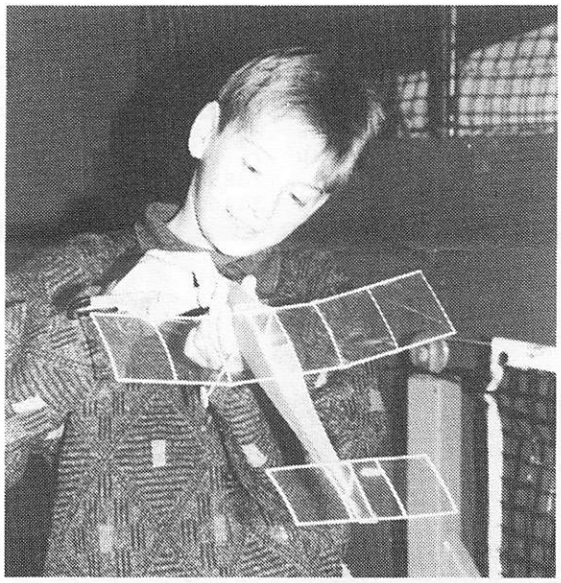
Armand Petit (B) with well-flying Sainte



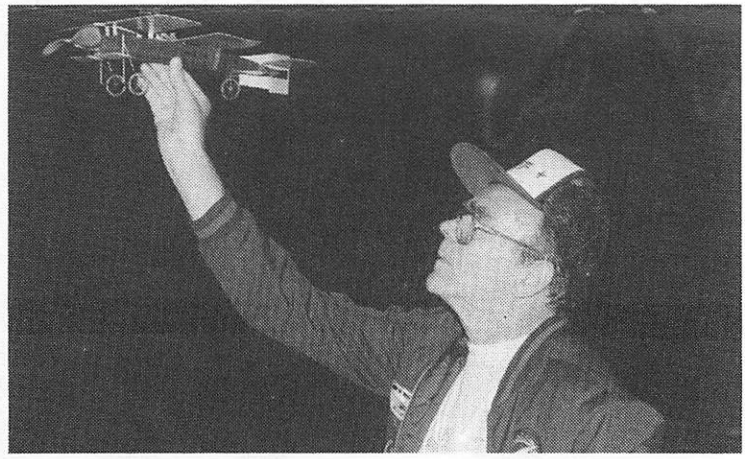
Pavel Stranik (CS) and Tipsy Junior (foto B. Sabel)



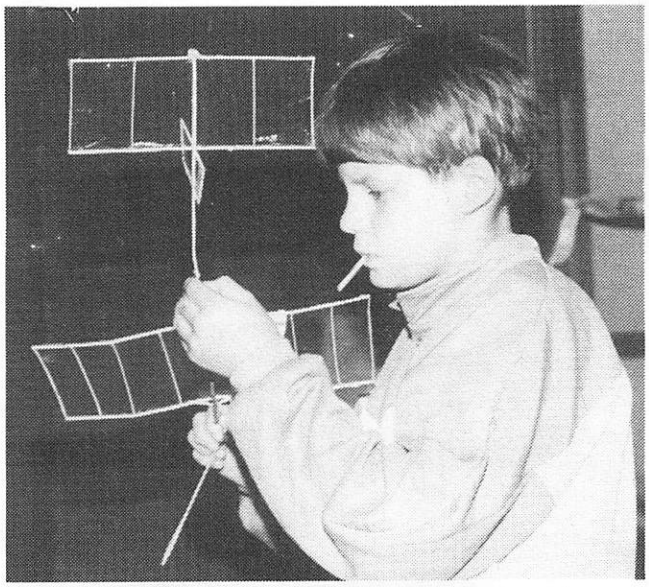
Mario Ganzeboom (NL) gave himself barely any rest



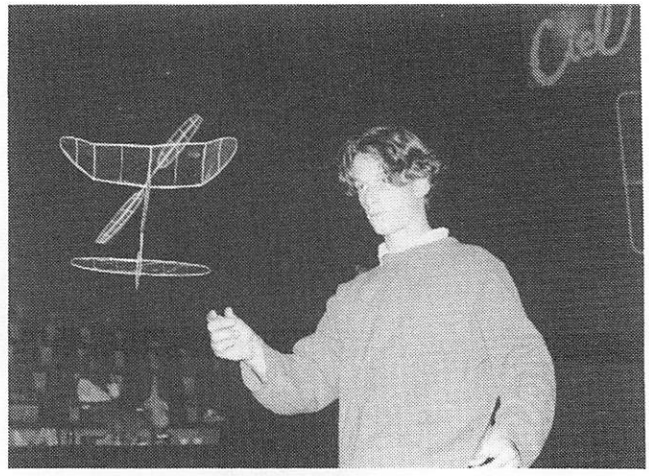
Florian Glöckner (D) adjusts side-thrust



Benno Sabel (D) and multi-plane Koechlin Tandem 1909



Ludovic van Caneghem (B) and beginners 35cm model



A state-of-the-art 35cm model by Florin Bodin (F)

Nottingham Interscale '93

September 25/26, 1993

PEANUT (20 competitors)

				Static		Flight		Total
				Score	Posn.	Score	Posn.	
1.	T. Alfery	CS	Avia BH 25 J	52.0	4	135.0	1	5
2.	A. Sephton	GB	Lacey M10	48.5	6	134.0	2	8
3.	R. Horwood	GB	SE5	52.5	3	101.0	7	10
4.	T. Hultgren	S	Bucker Jungmann	51.5	5	102.0	6	11
5.	N. Peppiatt	GB	Aeronca K	47.5	7	116.0	5	12

PISTACHIO (19 competitors)

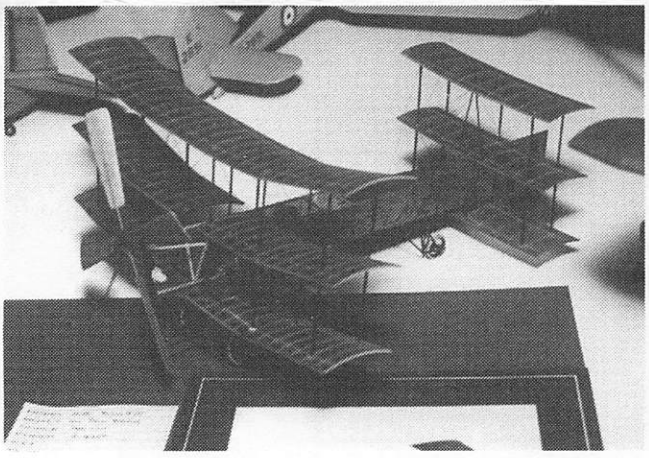
				Static		Flight		Total
				Score	Posn.	Score	Posn.	
1.	J. Sugimoto	JAP	Voisin Hydroplane	38.0	2	103.0	7	9
2.	T. Hultgren	S	Waco SRE	29.0	6	108.0	6	12
3.	R. Masters	GB	SE5A	31.5	4	96.0	9	13
4=	P. Frostick	GB	Piper Cub	23.0	9	113.0	5	14
4=	N. Peppiatt	GB	Speed Bearcat	22.0	12	142.0	2	14

OPEN RUBBER (25 competitors)

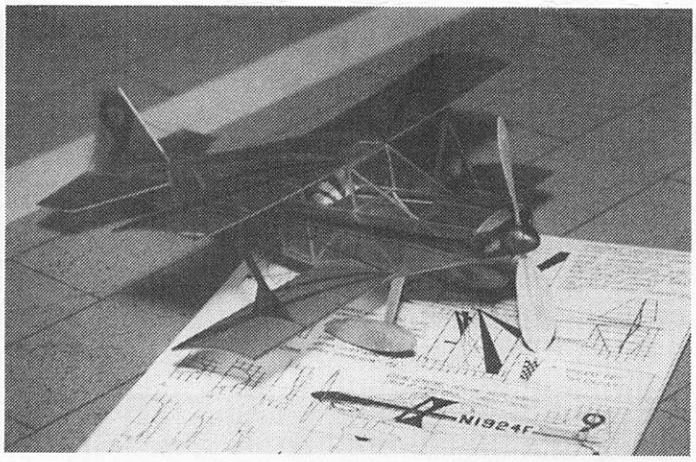
				Static	Flight				Total
					Rd 1	Rd 2	Rd 3	Rd 4	
1.	B. Purseglove	GB	Westland Lysander	1422.5				1455	2877.5
2.	A. Sephton	GB	ABC Robin	1532.0			1227	1068	2759.0
3.	D. Sheppard	GB	Curtiss Robin	1571.0		1086			2657.0
4.	P. Briggs	GB	Bleriot XT BG	1441.0	1173	1044	1176	1041	2617.0
5.	N. Peppiatt	GB	Puss Moth	1416.0			1197		2613.0

OPEN CO_2/ELECTRIC (18 competitors)

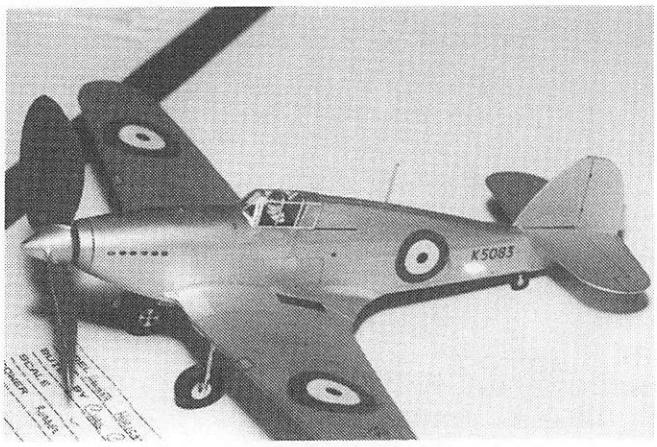
				Static	Flight				Total
					Rd 1	Rd 2	Rd 3	Rd 4	
1.	T. Alfery	CS	Spad XIII	1228.0	1748		1590	1659	2976.0
2.	C. Newman	GB	RWD-8	1383.0		958	1541	1128	2924.0
3.	P. Briggs	GB	Bleriot	1245.0	1335	1503		1530	2775.0
4.	D. Knight	GB	Hawker Cygnet	1577.0	1108				2685.0
5.	A. Sephton	GB	ABC Robin	1245.0	1001	1189	1401	762	2646.0



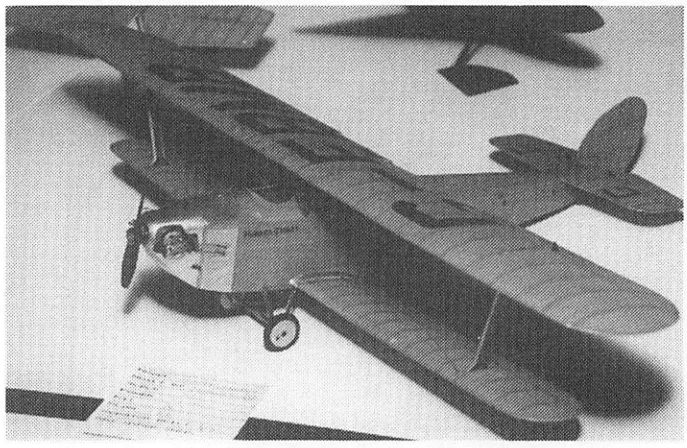
A splendidly built Avro Bullseye Peanut by Paul Briggs



Nick Peppiatt's Pistachio Speed F8F Beercat was capable of very long flights



Well-finished Hawker Hurricane by Chris Chapman



Derek Knight got very high scale marks for his electric powered Hawker Cygnet (photographs by Gé Brouwer (NL))

INDOOR SCALE, F4D & F4E
ASPECTS OF THE NEW F.A.I. RULES

by Doug Sheppard (GB)

Indoor scale competitors in the U.K. are familiar with the current F.A.I. rules for F4D (rubber power) and F4E (CO2/Electric power) but some fail to make the best of them. The following observations are made from experience as a competitor, judge and contest director and are offered as a help for newcomers to these classes. But you should obtain a copy of the new rules and study them thoroughly before embarking upon a project.

DOCUMENTATION AND PROOF OF SCALE Look upon the mandatory requirements of section 6.1.9 of the General Scale rules as a check list before any contest that you may enter. A 3-view drawing as published can be inaccurate; if there is any doubt about its authenticity or if you have had to re-draw any part of it, submit your changes together with the evidence to your National Authority for approval. The alternative is to note carefully on your documentation the minor differences between the drawing and the photographic evidence submitted to the judges as proof of scale.

Arrange your documents in a logical order keeping in mind section 6.1.10 of the General Scale Rules. Mount the documents on lightweight material of a convenient size; heavy boards are difficult to hold for the twenty minutes or so usually devoted to scrutineering. Do not use loose-leaf folders, inevitably some piece of vital information will be missed or will fall out.

JUDGING FOR FIDELITY TO SCALE AND CRAFTSMANSHIP Try to provide adequate drawings and photographic evidence to help the judges with items 1, 2 and 3 of section 6.1.10. Remember that they can only score against what they are given by you and never what they may know about the prototype aircraft that you have modelled. If you have found it difficult to obtain a good selection of photographs of an obscure subject it is essential that you provide a comprehensive 3-view drawing of the aircraft.

The judges will take into account the complexity of your colour scheme and markings. Curved lines, complicated patterns and logos which are well excecuted will score higher than an equally well presented but simple scheme.

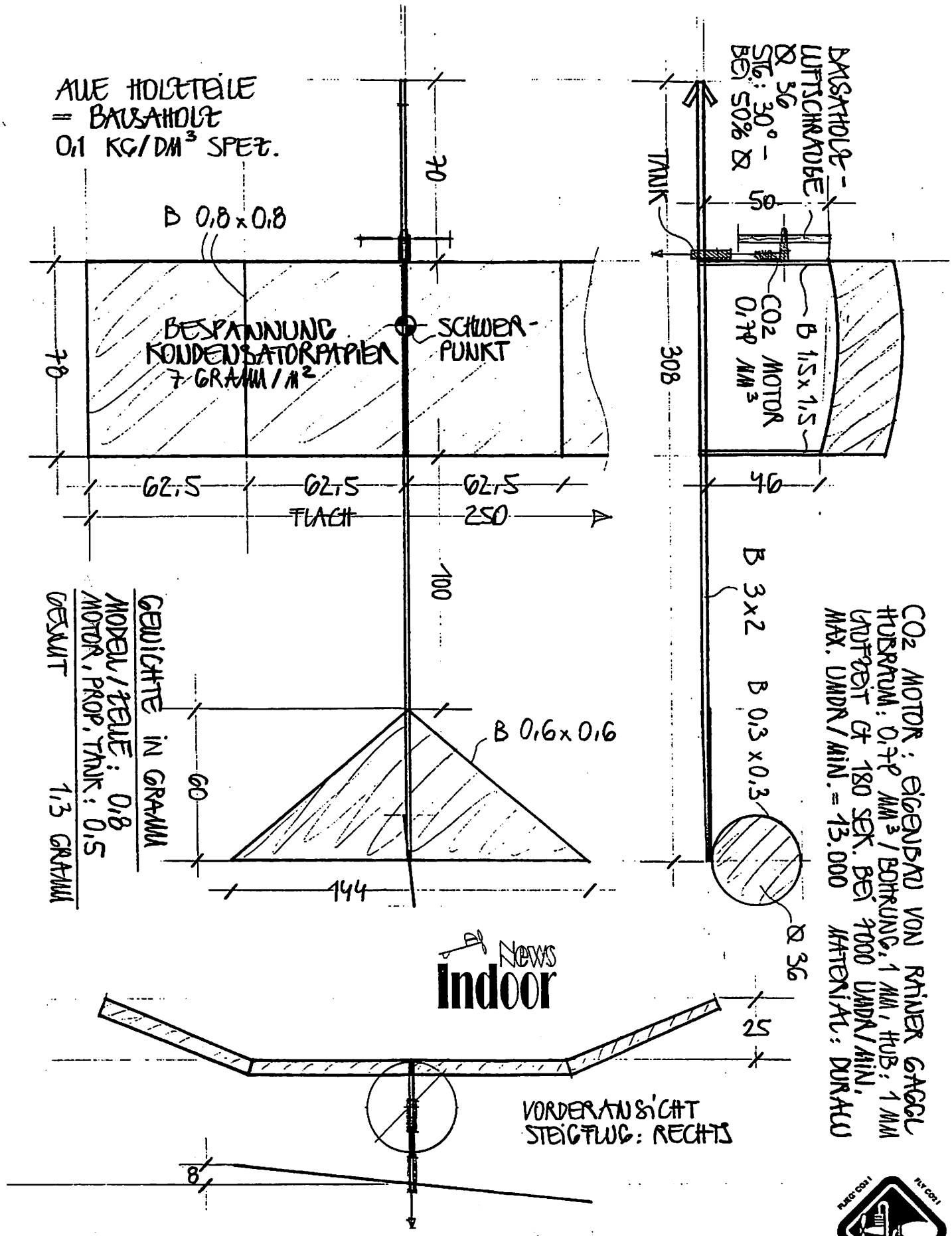
Correct surface texture and overall realism is difficult to achieve. But careful control of the application of cellulose dope or colour will be rewarded. I am personally always surprised that more use is not made of foam and paper in construction, there are so many stressed-skin subjects waiting for attention!

Good craftsmanship separates the top models from the average ones. In constructional terms this can be seen in clean lines, filled grain, neat trailing edges, neatness of assembly and the authentic appearance of all surfaces. Scale detail applied to the model must be authenticated in your documentation and bearing in mind that too much of it may add unwelcome weight, it may be necessary to incorporate only important items modelled to a high standard.

THE FLYING SCHEDULE The model must be released cleanly with all wheels/skids resting on the ground. Acceleration should be smooth and in a straight line and either the nosewheel or skid should leave the ground before the mainwheels. Seaplanes and floatplanes may use a dolly or wheels from which to take-off and no penalty will be incurred during the fidelity to scale or flying judging for their use.

The model should become airborne in a manner appropriate to the subject and then climb to cruising altitude. A high performance aircraft such as a Pitts Special should climb steeply but a Bleriot may hardly leave ground effect.
Appropriate scale cruise speed is a basic target and is a product of wing-loading, trim and power. The descent and landing approach should follow smoothly from the cruise at an appropriate angle of descent and a landing attitude consistant with the prototype should be adopted. A safe landing without undue bounce should follow, with the model decelerating realistically in a straight line to rest. Evidence of a sprung undercarriage will have been noted by the judges. Realism in flight carries the highest weighting, or K factor and it is customary for the judges to confer before awarding this mark. They will be looking to see if the model mirrors the performance of the prototype in speed, altitude and stability and demonstrates smooth transitions between the various phases of flight.

IN CONCLUSION The maximum possible scores in both Fidelity to Scale, section 6.1.10, and Flight realism, section 6.5.5, are identical; and in a well-organised contest you should be able to study your flight scores between rounds of flying so that improving trim adjustments can be made. Finally, your best flight score will be added to your static score to give you a final score and eventual placing in the contest.



SAALFLUGMODELL MIT CO_2 MOTOR

VON RAINER GAGGL, SEUFELDERGASSE 8, A-8041 GRAZ
TEL: 0316/473826 · MASSSTAB 1:2, ALLE MASSE IN MM!
GEZ: WALTER HACH
MAI 1993

The world's smallest CO_2 motor

by Rainer Gaggl (Austria)

Klaus Jörg Hammerschmidt (GER) reports: Rainer Gaggl- this name will be unknown to all indoor flyers. But there lives a man with this name in Austria and he is a world champion! Since six years a meeting is held in Austria of modellers, who share the same interest: CO_2- motors and CO_2-powered models. These meetings always attract important people, like György Benedek (HUN), Bill Brown (USA), Stefan Gasparin and Tonda Alféry (Czech). This year a young man from Graz appeared, of whom none of the CO_2 people had heard of before... and he brought with him small and very small functioning (!) motors which he demonstrated for us in flight.
His smallest motor had a cilinder content of only 0,75 mm^3 - that is 0,25 mm^3 smaller than the current world record motor of Stefan Gasparin - and this masterpiece weighs including tank and propeller only 0,5 gram! This motor was fitted onto an indoormodel of 1,3 gram, which was repeatedly flown in the workshop and dining room. We can show you a photograph of the builder and a plan of the model. Study it with interest and admiration, what will be all you can, as certainly none of you will be able to build it yourselves!



Rainer Gaggl with the smallest CO_2-motor in the world

COMMENTS ON F1L RULES

from John O'Donnell (GB):

The various suggestions for EZB rules would indicate that their purpose should be decided as a first step. Define the problem, then look for solutions. Do we really need another event for experts? - or a record world championship event that merely tests all the same skills as F1D? I reckon we need a competitive event that can be flown by a (relatively) large number of modellers - rather than something that only appeals to the (self-considered) "super-expert". Experience has shown that any static set of rules eventually produces extreme models - that the then protagonists defend at all costs! We need to be very careful and watch how things develop - and act as appropriate.

from Thedo André:

In Free Flight Digest (May 93) George Xenakis reported about the March CIAM meeting: "The proposed weight change of indoor F1L EZB class to 1.0 grams failed principally because of U.K. and Hungary objections. Both indicated that they actually favored increasing the present 1.2 gram minimum. As usual, the argument was that it would be easier for the juniors to build it at the heavier weight". The views of the U.K. and Hungarian delegates were not made publicly known before the CIAM meeting. Please do this as yet. There is always space in Indoor News for discussion. So far most comments seem to favor reducing or even dropping the minimum weight.

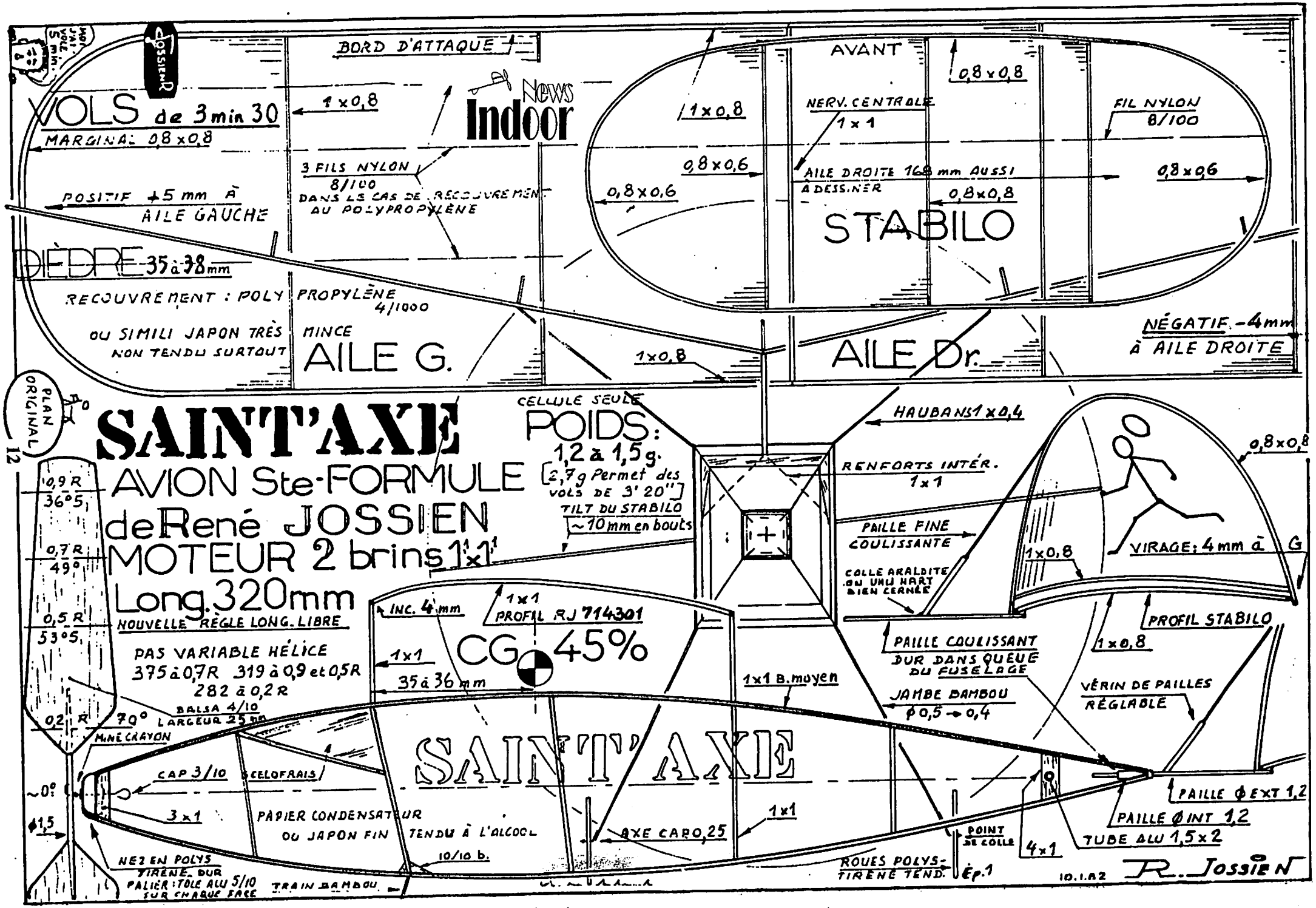
CORRECTION I

In IN 22 I made a mistake in converting the weights of Polymicro into g/m^2. Here are the correct values:

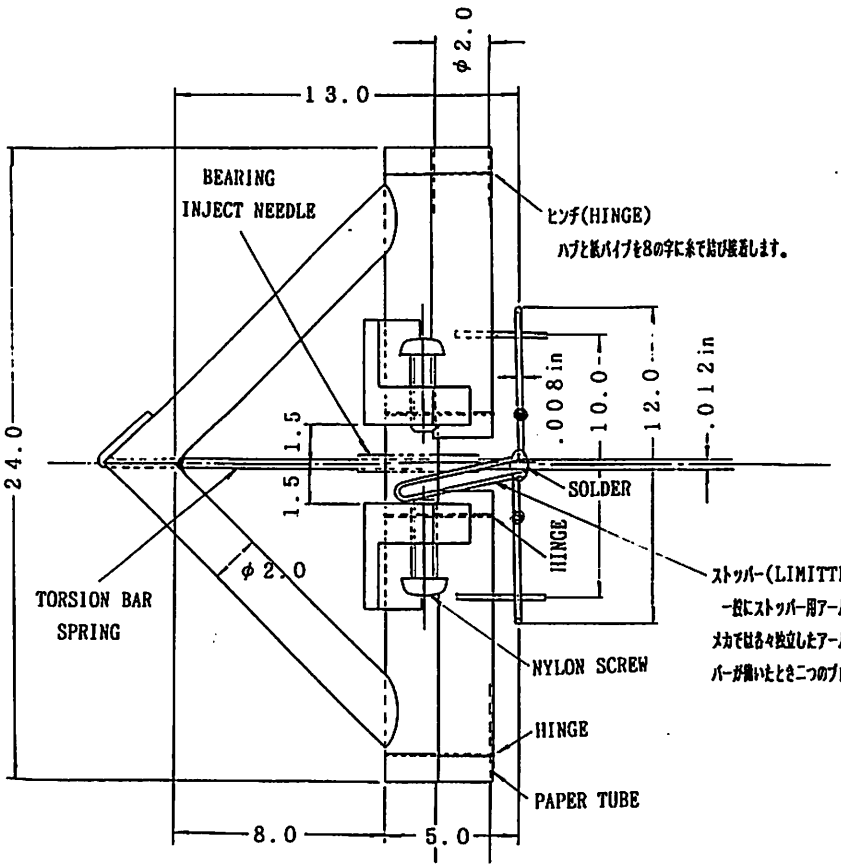
Ultra film	.0045 oz./100sq.in.	1,98 g/m^2
Ultimate	.00366	1,61
Polymicro	.00285	1,25
Microfilm	.0015	0,66

CORRECTION II

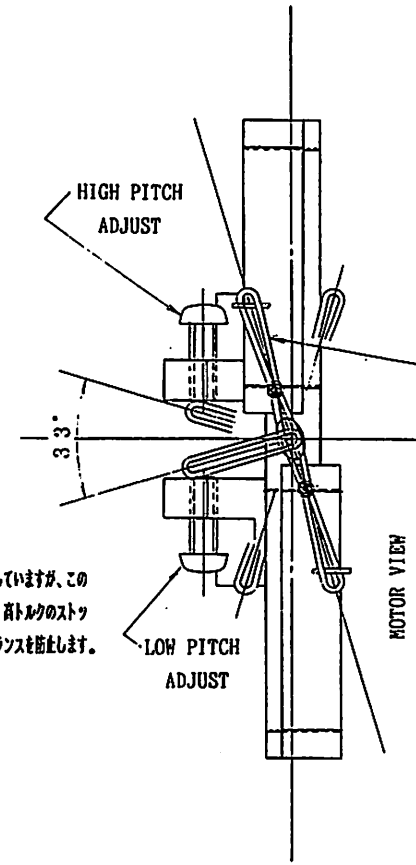
A few lines were messed up in Boyd Felstead's description of his microfilm tank. Read after the 8th line: Sides and ends of the same material (polystyrene) about 2" high were cemented to the tank base by silicone. The "bung" (drain) hole was reinforced by a plastic ring to avoid water leaks. After use I found some drips of water did occur so a stainless steel ring and plastic drainer (as used in bathroom hand basins) was inserted, again using silicone as the sealer/cement agent.


MODÈLE DU MOIS
dossier
VOLS de 3 min 30
MARGINAL 0,8 x 0,8
POSITIF +5 mm À AILE GAUCHE
DIÈDRE 35 à 38 mm
RECOUVREMENT : POLY PROPYLÈNE 4/1000
OU SIMILI JAPON TRÈS MINCE NON TENDU SURTOUT
AILE G.
BORD D'ATTAQUE
1 x 0,8
News Indoor
3 FILS NYLON 8/100 DANS LE CAS DE RECOUVREMENT AU POLYPROPYLÈNE
1x0,8
0,8x0,6
0,8x0,6
AVANT
0,8 x 0,8
NERV. CENTRALE 1 x 1
FIL NYLON 8/100
AILE DROITE 168 mm AUSSI À DESSINER
0,8x0,8
0,8x0,6
STABILO
NÉGATIF -4mm À AILE DROITE
AILE Dr.
1x0,8
PLAN ORIGINAL
12
SAINT'AXE
AVION Ste-FORMULE
de René JOSSIEN
MOTEUR 2 brins 1 x 1
Long. 320mm
NOUVELLE RÈGLE LONG. LIBRE
PAS VARIABLE HÉLICE
375 à 0,7R 319 à 0,9 et 0,5R
282 à 0,2R
0,9 R 36°5
0,7 R 49°
0,5 R 53°5
0,2 R 70°
BALSA 4/10 LARGEUR 25 mm
MINE CRAYON
CELLULE SEULE
POIDS: 1,2 à 1,5 g.
[2,7 g Permet des vols de 3'20"]
TILT DU STABILO ~10 mm en bouts
HAUBANS 1 x 0,4
RENFORTS INTÉR. 1 x 1
PAILLE FINE COULISSANTE
COLLE ARALDITE OU UHU HART BIEN CERNÉE
0,8x0,8
VIRAGE: 4 mm à G
1x0,8
PROFIL STABILO
1x0,8
PAILLE COULISSANT DUR DANS QUEUE DU FUSELAGE
JAMBE BAMBOU Ø 0,5 → 0,4
VÉRIN DE PAILLES RÉGLABLE
INC. 4 mm
1x1 PROFIL RJ 714301
CG 45%
1x1
35 à 36 mm
1x1 B. moyen
CAP 3/10
CELOFRAIS
3 x 1
PAPIER CONDENSATEUR OU JAPON FIN TENDU À L'ALCOOL 10/10 b.
AXE CARO 0,25
1x1
POINT DE COLLE
ROUES POLYSTIRÈNE TEND.
Ép. 1
4x1
PAILLE Ø EXT 1,2
PAILLE Ø INT 1,2
TUBE ALU 1,5 x 2
~0°
Ø1,5
NEZ EN POLYSTIRÈNE DUR PALIER: TÔLE ALU 5/10 SUR CHAQUE FACE
TRAIN BAMBOU
10.1.82
R. JOSSIEN

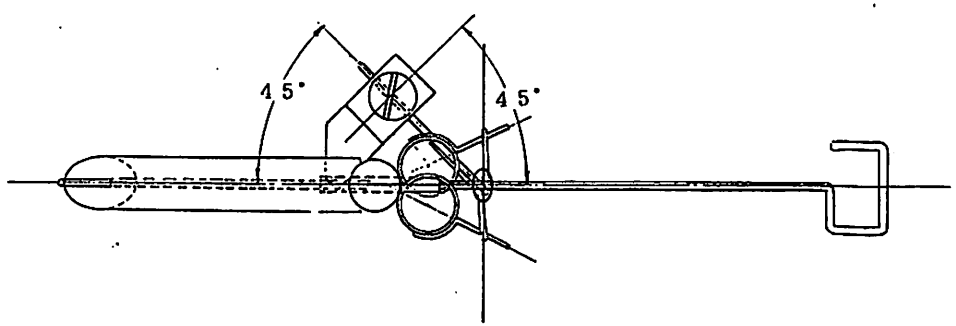
Satoshi Kinoshita
175-1-312 Shimosakunobe
Takatsuku Kawasakishi
Kanagawaken Japan 〒213



ストッパー(LIMITTER HORN)
一般にストッパー用アームはドライバー用アームと共用にしていますが、このメカでは各々独立したアームをもっております。その理由は、高トルクのストッパーが働いたときニつのプロプラブレードのピッチのアンバランスを防止します。



ドライバー(DRIVER)
ピンとドライバーのクリアランスを小さくしプロペラピッチの精度を高め、なお、大きな角度調節を滑らかにするのが目的です。ピンの抜きの角度が大きいときは精度が広くなり、ピンが中心にきたとき精度が良くなります。糸で巻いて接着剤で固めます。



このメカの設計のねらいは、丈夫で安定した動作をすること、そして広範囲に調整できることを第一目標にしました。スプリングは、強さが長さに比例するトーションバースプリングを使用しています。また、プロペラブレードの交換、ピッチの変更が簡単に出来るように紙パイプのソケットを取り付けました。低トルク及び高トルクのアジャスタブル・ストッパーは自由に大きな範囲を調整することができます。

ADJUSTBLE VARIABLE PITCH PROPELLOR HUB

BY SATOSHI KINOSHITA Japan

MECANISME pour BIMOTEURS taille "PEANUT"

Etudié par E. Fillon Aéromodéliste

Fait à partir d'engrennages de Jouets Tomy et d'aiguilles pour piqûres poids 2gr Multiplication 1,766/1

The French Arachide

News Indoor

Pignon 30 dents Module 0,2

Couper

Calibre laiton

Aiguille ϕ1mm

Pignon

ϕ 10 ou + ϕ 0,7 mm

trou pour évacuation des copeaux

ϕ 0,4 mm

Calibre et perçage des 2 pignons de 30 dents

Découper le contour du circuit imprimé suivant le modèle de Peanut à équiper

Mécanisme vu de l'arrière

Remontage

Vol

les deux hélices tournent dans le même sens facilitant le vol circulaire.

Pointeau ϕ 0,7mm

Tole acier ép 1,5 mm

Pointeau ϕ 1,5 mm

Scotch double face

Pointage

foret ϕ 0,7mm

perçage

Ajustage du jeu de fonctionnement par allongement du métal du calibre

Scotch double face

Perçage du CI

foret ϕ 0,7mm

Circuit imprimé époxy simple face ép 0,8mm

ϕ5mm

ϕ 0,8mm agrandir 3 trous

Enlever à la fraise ou à l'acide par le procédé utilisé pour les CI les parties de cuivre inutiles

Pignons Tomy 30 dents

Aiguille ϕ 0,7mm long 12

Collage araldite

Rondelles laiton ou téflon

Ressort cap ϕ0,3mm Soudé étain

Palliers laiton 0,4mm Soudé

Fil de laiton soudé étain sur cap et aiguille ϕ 0,7 mm

Entraineur Laiton soudé sur tube ϕ 1,5 et axe cap ϕ 0,8 + Collage araldite

Roue Tomy 53 dents

Aiguille ϕ 0,8mm collée araldite

Levier de blocage cap ϕ 0,5mm

Fil de laiton soudé

Axe cap ϕ0,8mm

Souplisseau

Ne jamais remonter le caoutchouc par les hélices

Laiton 0,4 mm

Percage ϕ 0,7mm avec calibre

≃ 3mm

ϕ 0,8mm

4

Confection et pliage des palliers

Laiton 0,4m ϕ 1,5

Roue 53 dents

tube laiton ϕ 0,8 - 1,5mm

Entraineur

Hélice plastique Kaisun de 4" réduite en diamètre ou hélice balsa

Cône balsa dûr

Aléser à ϕ 1,5mm l'hélice sur profondeur nécessaire

cap 0,3mm dressée : Attention pas de coude brusque

Fil de Laiton soudé

Doigt d'entrainement cap 0,4mm emmanchée à force sur l'aiguille

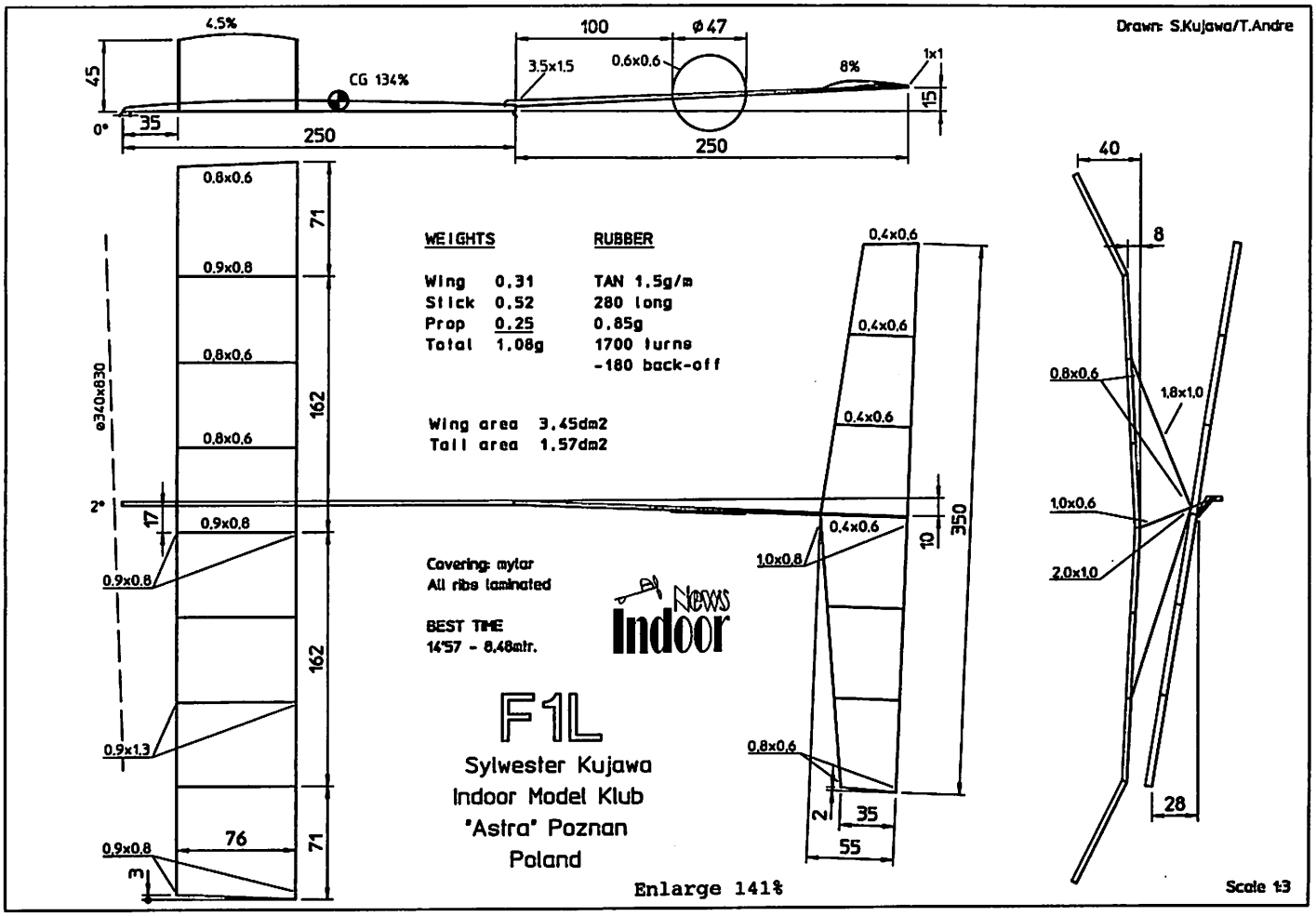
Axe porte hélice Aiguille ϕ 0,7mm long 17

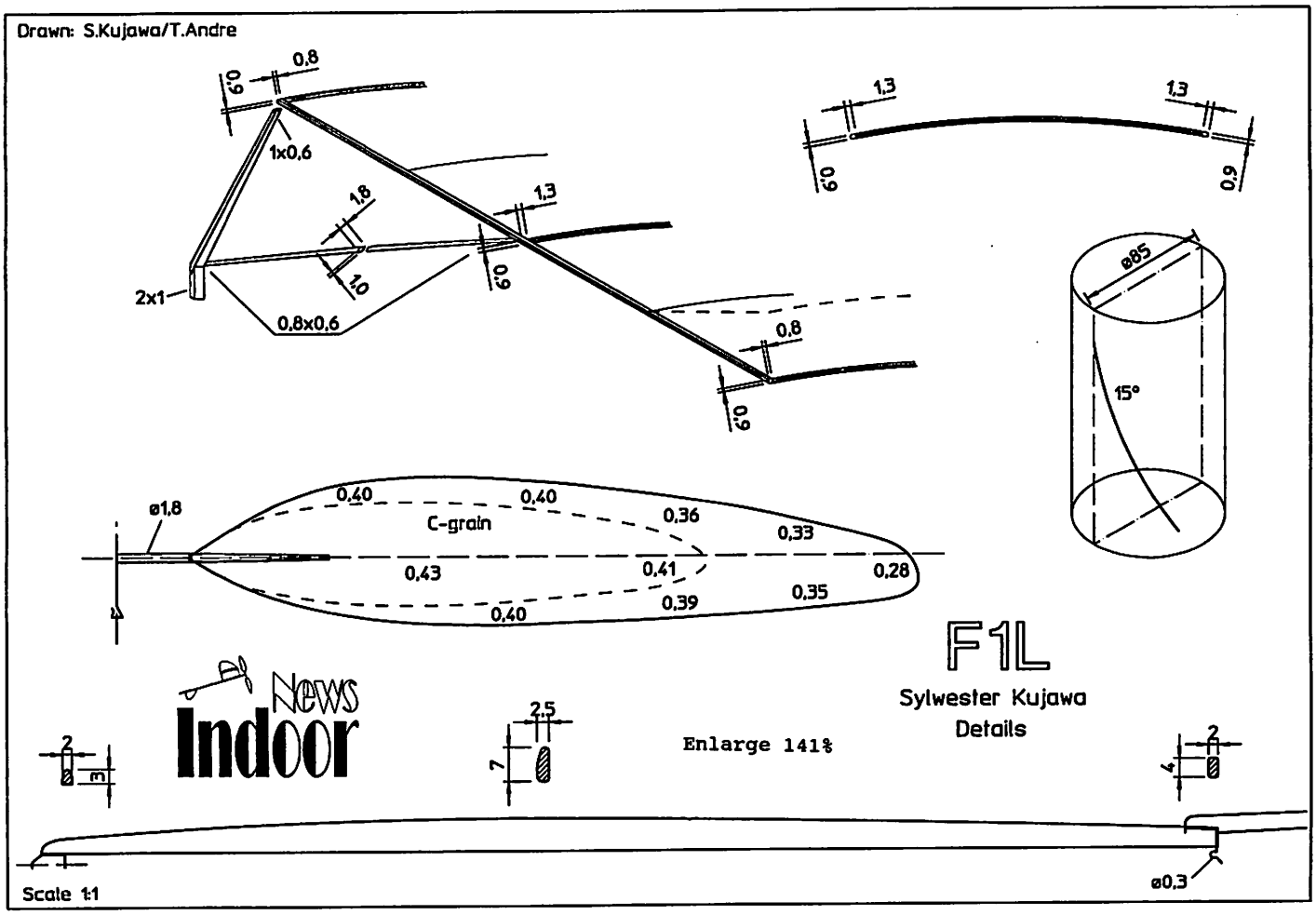
Pallier aiguille ϕ 1 long 10mm à coller araldite sur la pièce support avec renforts en contre plaqué

Bois dûr

Soudure des palliers

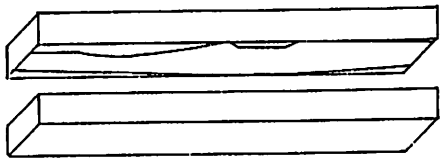
E.Fillon 1992


Drawn: S.Kujawa/T.Andre
4.5%
45
CG 134%
0°
35
250
100
ø47
3.5x1.5
0.6x0.6
8%
1x1
15
250
WEIGHTS
Wing 0.31
Stick 0.52
Prop 0.25
Total 1.08g
RUBBER
TAN 1.5g/m
280 long
0.85g
1700 turns
-180 back-off
Wing area 3.45dm2
Tail area 1.57dm2
Covering: mylar
All ribs laminated
BEST TIME
14'57 - 8.48mtr.
News Indoor
F1L
Sylwester Kujawa
Indoor Model Klub
"Astra" Poznan
Poland
Enlarge 141%
Scale 1:3
0.8x0.6
0.9x0.8
0.8x0.6
0.8x0.6
ø340x830
71
162
162
71
76
0.9x0.8
0.9x1.3
0.9x0.8
m
2°
17
0.9x0.8
0.4x0.6
0.4x0.6
0.4x0.6
0.4x0.6
1.0x0.8
0.8x0.6
10
350
2
35
55
40
8
0.8x0.6
1.8x1.0
1.0x0.6
2.0x1.0
28

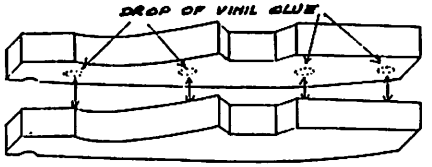

Drawn: S.Kujawa/T.Andre
0.8
6.0
1x0.6
1.8
1.0
1.3
6.0
2x1
0.8x0.6
0.8
6.0
1.3
1.3
6.0
0.9
ø65
15°
ø1.8
0.40
0.40
C-grain
0.36
0.33
0.43
0.41
0.28
0.40
0.39
0.35
News Indoor
F1L
Sylwester Kujawa
Details
Enlarge 141%
2
3
2.5
7
2
4
Scale 1:1
ø0.3

GENERAL INSTRUCTIONS TO CARVE FUSELAGES FROM POLYESTYRENE FOAM

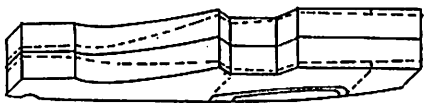
by Ulises Alvarez (UR)



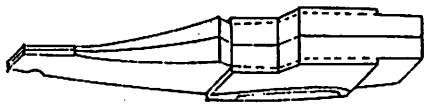
1 USE TWO POLYESTIRENE FOAM BLOCKS 30 gr/in^3 TO FORM FUSELAGE; CUT DIMENTION AS CLOSE AS POSSIBLE TO THOSE INDICATED IN THE DRAWINGS.



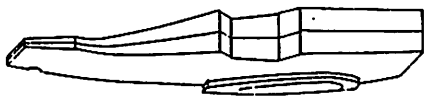
2 MAKE COPIES OF DRAWING AND CUT CAREFULLY TWO SIDE VIEWS OF FUSELAGE; USE VINIL GLUE TO GLUE THEM UP ON EACH SIDE OF THE BLOCKS MAKING SHURE THEY ARE CORRECTLY LOCATED; CUT TO SHAPE USING JIG SAW, LEAVING A LITTLE MARGING TO FINISH WITH FINE SAND PAPER. GLUE BOTH BLOCKS ONLY WITH A DROP OF VINIL GLUE.



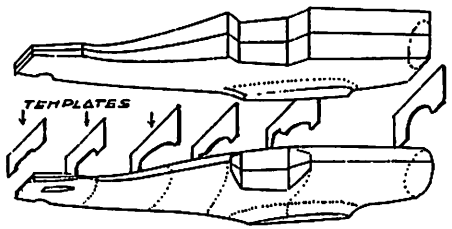
3 CUT TOP VIEW OF FUSELAGE EDGE, FRONT AND REAR OF CANOPY; GLUE BOTH COPIES OVER POLYESTYRENE FOAM ALREADY TRIMED, PAYING ATTENTION TO WING ROOT SECTION



4 TIG SAW OUT FOLLOWING FORMER GUIDES; ADJUST BY SANDING WITH 120 SANDPAPER. DRAW AIRFOIL WING SECTION, STREAMLINE OF RIB AND ROOT

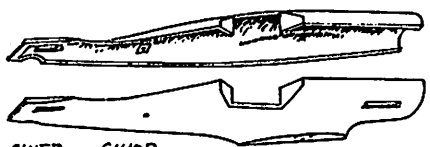


5 CONTINUE BY CARVING FUSELAGE SIDES TAKING CARE NOT CUTTING OVER STREAMLINE TRANSITION SHAPE

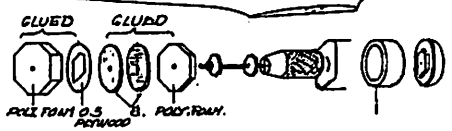


6 SAND STREAMLINE RIB ROOT BY SANDING WITH FINE SAN PAPER WRAPED AND GLUED OVER DIFFERENT DIAMETERS WOOD DOWELS OR PLASTICK TUBES

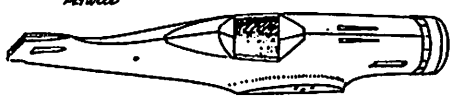
7 CUT OUT FROM PHOTO COPIE, TEMPLATES SECTIONS PREVIEWSLY GLUED TO CARDBOARD SHEET TO CONTROL FUSELAGE SHAPE; FINISH EXTERNAL CARVING OF FUSELAGE USING TEMPLATES CAREFULLY



8 SEPARATE BOTH PARTS OF FUSELAGE AND HOLLOW WITH 120 GRET SANDPAPER GLUED TO DIFFERENT DIAMETER PLASTIC TUBES; USE MOTOR TOOL FITTED WITH ABRASIVE BITS UNTIL REACHING THICKNESS OF 1.2 TO 2.5 mm. AT FRONT OF FUSELAGE.



9 NUZZLE COMPONENTS: POLYESTYRENE FOAM, PLYWOOD 0.5 mm. DISC, NUZZLE BLOCK CUT OF 1 mm. BALSA DISC AND FORMER OF POLYESTYRENE, ROUND ALL COMPONENTS TOGEDER



10 AFTER CHECKING CAREFULLY THAT ALL NECESSARY STEPS HAVE BEEN TAKEN INSIDE OF FUSELAGE, GLUE BOTH SIDES OF FUSELAGE, GLUING FRONT CILINDER AND NUZZLE TAKE DOWN BLOCK.

POLYMICRO FILM can be used to cover your model surfaces SMOOTHLY by either of TWO METHODS. In either case the adhesive should be applied to the surface or outline and allowed to dry and then ACTIVATED after the outline and the film are in contact. The film can be used as is or it can be CRINKLED by compressing it into a ball in your hand and then pulling it apart.

ADHESIVES such as 3M 77 and thinned rubber cement work well and rubber cement thinner or nitrate thinner can be used to ACTIVATE the cement by going around the outline with a fine brush and thinner. Water base contact cement can cause the outlines to expand and distort and therefore not recommended.

CUTTING THE FILM is accomplished with the new super sharp platinum razor blades, or heat from a 10 Watt soldering iron or a battery powered cautery.

DIHEDRAL BREAK SLACK can be removed with a WET fine brush along the rib.

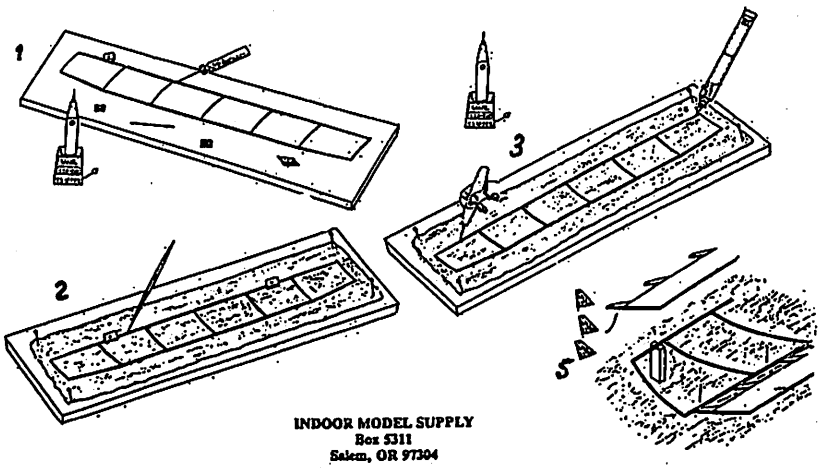
THE TWO METHODS ARE: 1. Place the FILM ON TOP of the outline, FIRST ATTACHING IT TO A FRAME with cement, or 2. to place the OUTLINE ON TOP of the film. No. 2 is described below and is similar to covering with microfilm.

POLYMICRO FILM IS ABOUT THE WEIGHT OF RED-GREEN MICROFILM.

ULTRA FILM	.0045 oz./100 sq. in.	.00006" thick.
ULTIMATE	.00366 oz./100 sq. in.	.000047" thick.
POLYMICRO	.00285 oz./100 sq. in.	.0000353" thick
MICROFILM	.001-.0015 Oz./100 sq. in.	

USE A WIDE BRUSH TO SMOOTH OUT THE FILM BEFORE IT IS ATTACHED TO A FRAME OR BEFORE PLACING THE OUTLINES ON IT. ELECTRON BUILD UP CAUSES PROBLEMS A TIMES. SPRAYING THE FILM WITH WATER WILL REMOVE THE CHARGE, THE ELECTRONS LEAVING WITH THE WATER MOLECULES.

FIG.5 SHOWS HOW TO LIFT VERY LIGHT STICKY OUTLINES AND KEEP THE SPARS AND OUTLINE STRAIGHT AND TRUE. A STRAIGHT EDGE WITH EXTENTIONS CEMENTED TO IT ARE LIGHTLY CEMENTED TO THE OUTLINE.



INDOOR MODEL SUPPLY
Box 5311
Salem, OR 97304

POLYMICRO PRICE 15 ft. = $ 12. PLUS shipping: in U.S.A $3.50
Outside U.S.A. AIR $$5.50 WITH AN PRICE is $15.
Rolled on 1/8" x 17.5" TUBE so wood orders are well protected.