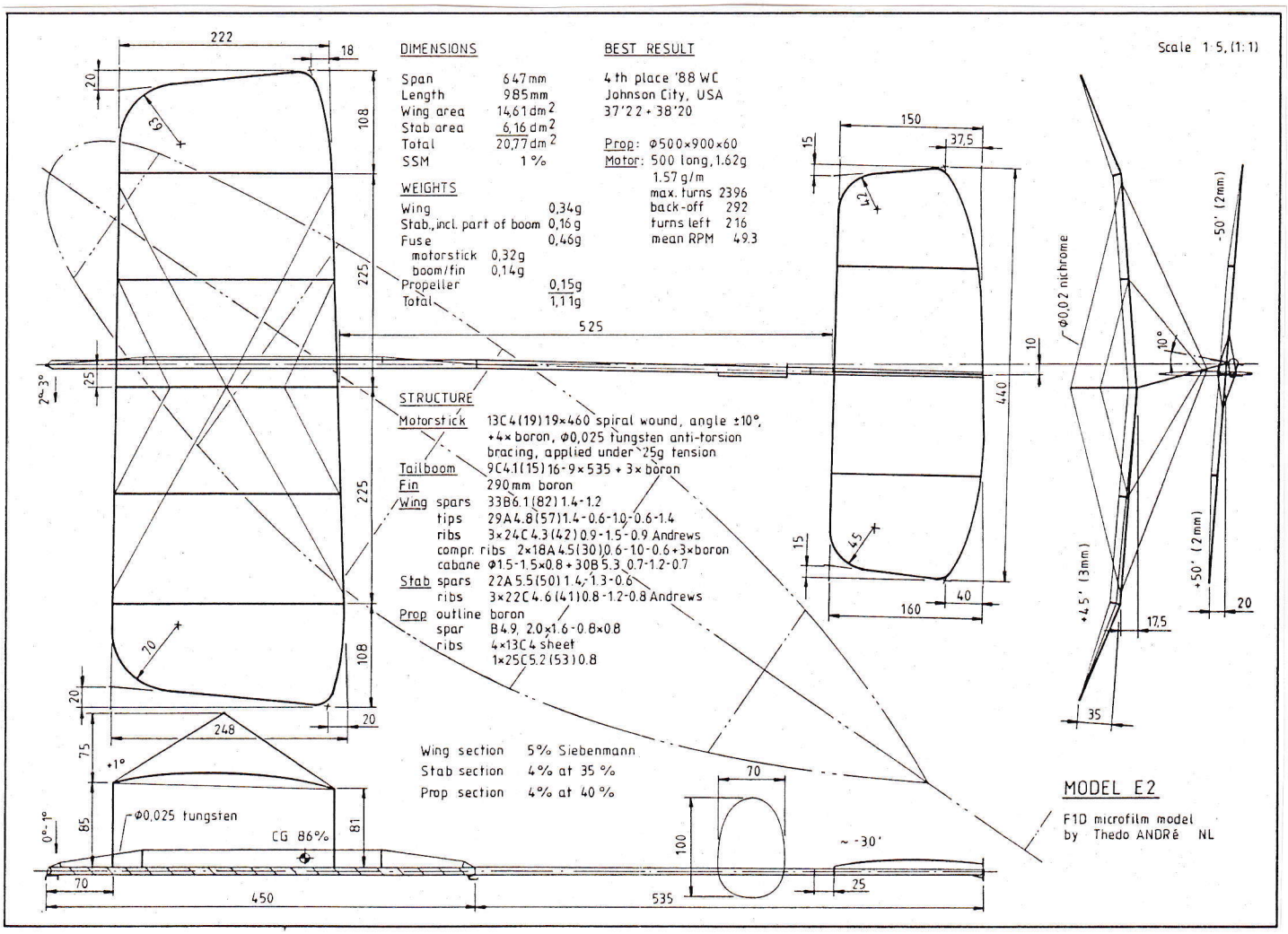


Indoor News 1-89

Dear friend,

We are now writing January 15th but I will continue the odd numbering! Then I always know what I owe you!!

This new "face" was designed by Steve Newbery, a new reader living in Brussels. A nice contribution.

Europe is changing these days and nobody can tell what the changes will mean to the aeromodelling scene, especially the INDOOR one ....

The situation with the coming F1D World Championships is a bit confusing. Aurel Popa of Romania said in his Christmas card to me "see you at Slanic 1990" but what does the FAI say? Then there is a new offer to run the event at Johnson City once again, and since primo December the editor and some Czech indoor modellers are working on a offer to run the event at the "Z-Hall" in Brno, Czechoslovakia!!!! A Danish/Czecholovakian cooperation....

The "Z-Hall" is not perfect but good times CAN be flown there. A. Ree, HUN, did 39:29 this year in the IGRA CUP. The main problem is the vent hole at the top - at 36 m - which can produce strong "thermals" with sometimes fatal hang-ups for the models. On the other hand ALL sites have their "snags" to which you have to adjust your flying. I myself spoiled four models at the W/Ch at Cardington 1986 due to hang-up and bad steering. And the Slanic has model eating walls and low temperatures. Though it is a general opinion that the site at Johnson City is very good I do hope that Europe will get the arrangement. If not, and the only reason is the "quality" of the flying site, then I think we will never see a W/Ch here in Europe anymore. And this would be a very bad situation.... We will know in February!

This issue is containing a lot of results from 1989 which I have got very late in the year. I wish some people would send such results very soon after the actual contests and I am asking some of my readers to help out here.

E. Fillon of France has sent me some Peanut-dwgs and a list of all his drawings which are available through himself.

Thank you very much to those who contributed, especially Bill Henderson, CAN, who did a lot of typing and reporting for IN.

Jorgen

PS. A modelling friend of mine has updated my handwritten files and also made the labels on which you will find the number of the last issue to be received with your present subscription.

Editor etc .....

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3 issues a year (approx) will appear around March, July and November.

Scandinavia 50,- Dkr
Europe 55,- Dkr/15 DM
Airmail elsewhere $10.00

MOSCOW

AMA SCALE-COMBINED AGES

14 ENTRIES

NAME	SUBJECT	1	2	3	4	BEST FLIGHT	2ND FLIGHT	AVERAGE BEST 2	SCALE POINTS	TOTAL	PLACE
John Blair	Cessna AW	90	90			90	90	90.0	100	190.0	1
Jim Miller	Lacey	90	90			90	90	90.0	96	186.0	2
Richard MacEntee	Lacey M-10	82	79	67	87	87	82	84.5	100	184.5	3
John Martin	Astra	70	77	86	81	86	81	83.5	99	182.5	4
Ken Groves	Bristol Scout D	71	74	75	77	77	75	76.0	100	176.0	5

NO-CAL - COMBINED AGES

23 ENTRIES

Name	1	2	3	4	5	Best Flight	Place
Chuck Slusarczyk	04:15	04:31	04:38	05:03		05:03	1
John Marett	03:40	04:38	04:09			04:38	2
Bill Henderson	03:40	00:41	01:12	03:05		03:40	3
Terry Hreno	02:49	01:43	01:54	02:16	03:21	03:21	4
Stu Weckerly	02:39	00:34	02:50	02:55	03:10	03:10	5

PEANUT SPEED - COMBINED AGES

4

Name	1	2	3	4	5	6	7	8	9	BEST MPH	PLACE
Chuck Markos	7.90	7.64								11.21	1
George Nunez	8.50									10.08	2
John Blair	14.15	10.72								7.99	3
Bill Henderson	11.94									7.18	4
Jim Davidson	-										5

AMA STICK-OPEN

Name		Best Flight	PLACE
Richard	Doig	35:21	1
Larry	Loucka	32:48	2
Dan	Belieff	29:58	3
Larry	Mzik	27:16	4

UNLIMITED RUBBER SPEED -COMBINED AGES

10

Name	1	2	3	4	5	6	7	8	9	BEST MPH	PLACE
Jim Thornbery	5.94	5.84								14.67	1
Chuck Markos	6.32	8.30	8.20	8.32	6.44					13.56	2
Bill Henderson	8.03	7.15	6.98							12.28	3
Bob Champine	13.81	17.12	7.81	12.50						10.97	4
John Voorhees	13.34	8.50	19.40							10.08	5

AJI OLD TIMER-COMBINED AGES

Name		Best Flight	PLACE
Don	Slusarczyk	26:51	1
Larry	Loucka	22:06	2
Chuck	Marcos	22:02	3
Joe	Krush	20:36	4
Wally	Simmers	20:18	5
Ron	Ganser	19:32	6

INTERMEDIATE STICK - OPEN

21 ENTRIES

Name	1	2	3	4	5	Best Flight	Place
Dan Belieff	00:21:36	00:17:21	00:26:30	00:23:37		00:26:30	1
Ron Ganser	00:18:29	00:23:14	00:24:13	00:23:12		00:24:13	2
Larry Loucka	00:19:50	00:21:07	00:21:09	00:24:07		00:24:07	3
Dick Obarski	00:20:23	00:21:58	00:22:32	00:23:48		00:23:48	4
Lew Gitlow	00:22:41	00:22:20	00:21:00			00:22:41	5

F1D-COMBINED AGES

Name		Best Flight	2nd. Flight	PLACE
Richard	Doig	35:32	35:10	1
Don	Slusarczyk	30:59	29:39	2
Jesse	Shepherd Jr.	30:50	26:17	3
W.	Hulbert	28:43	27:04	4
Manny	Radoff	31:42	23:41	5

R.O.G. CABIN - COMBINED AGES

6 ENTRIES

Name	1	2	3	4	5	Best Flight	Place
Ron Ganser	00:15:12	00:21:38	att	00:16:08	00:24:38	00:24:38	1
Dan Belieff	00:08:54	00:17:54	00:20:47	00:24:08		00:24:08	2
Larry Loucka	00:15:07	00:17:31				00:17:31	3
Tom Vallee	00:02:53	00:11:56	00:13:50	00:06:32		00:13:50	4
Joe Krush	00:11:05					00:11:05	5

EASY B - OPEN

CONTESTANT	Best Flight	Place
STAN CHILTON	00:23:43	1
JACK MCGILLIVRAY	00:23:39	2
EARL HOFFMAN	00:22:45	3
WALT VAN GORDER	00:22:01	4
JOE FOSTER	00:20:10	5
KEN GROVES	00:19:37	6
JIM CLEM	00:18:57	7
GORDY WISNIEWSKI	00:18:40	8
ANDREW TAGLIAFICO	00:18:38	9
BRUCE KIMBALL	00:16:51	10
RICHARD MILLER	00:16:37	11
BOB OPPEGARD	00:09:29	12
JAMES LONGSTRETH	00:08:30	13
DENNIS WEATHERLY	00:05:37	14

EASY B - JUNIOR

CONTESTANT	Best Flight	Place
ANDREW TAGLIAFICO	17:03	1
SCOTT ROBBINS	08:16	2
DWIGHT LARKS	04:50	3
CLINT HANNESON	00:00	4

EASY B - SENIOR

CONTESTANT	Best Flight	Place
DON SLUSARCZYK	14:49	1
DAVE WARREN	03:18	2
JASON YOUCK	00:00	3

CATAPULT GLIDER - OPEN

CONTESTANT	Best Flight	2nd Flight	TOTAL (BEST 2)	PLACE
STAN BUDDENBOHM	89.0	88.8	177.8	1
JOE FOSTER	71.5	68.1	139.6	2
JIM THORNBERY	68.2	65.7	133.9	3
DAN BELIEFF	65.1	62.5	127.6	4
CEZAR BANKS	59.0	56.7	115.7	5
GORDON WISNIEWSKI	56.3	56.2	112.5	6
STU BENNETT	58.6	51.8	110.4	7
AL BORER	51.2	48.4	99.6	8
DICK PETERSON	48.2	47.5	95.7	9
DENNIS WEATHERLY	48.0	47.0	95.0	10
LARRY KRUSE	47.1	46.0	93.1	11
HERB ROBBINS	35.0	34.0	69.0	12

HAND LAUNCH STICK - OPEN

CONTESTANT	Best Flight	Place
JOE FOSTER	00:38:44	1
BOB RANDOLPH	00:36:07	2
RICH DOIG	00:29:09	3
BRUCE KIMBALL	00:18:25	4

NOVICE PENNYPLANE - OPEN

CONTESTANT	Best Flight	Place
CEZAR BANKS	13:05	1
JACK MCGILLIVRAY	12:44	2
JIM CLEM	12:25	3
KEN GROVES	12:12	4
WALT VAN GORDER	11:43	5
DAVE HAGEN	11:34	6
JOE FOSTER	11:14	7
BRUCE KIMBALL	10:52	8
RICHARD MILLER	10:48	9
EARL HOFFMAN	10:16	10
BUD TENNY	10:06	11
DENNIS WEATHERLY	09:11	12
SHERMAN GILLESPIE	09:07	13
GORDY WISNIEWSKI	09:04	14
BOB OPPEGARD	08:24	15
STUART BENNETT	06:41	16
JIM THORNBERY	04:32	17
RICHARD STUART	04:29	18

INTERMEDIATE STICK - OPEN

CONTESTANT	Best Flight	Place
CLARENCE MATHER	00:27:19	1
DAN BELIEFF	00:26:45	2
STAN CHILTON	00:26:06	3
EARL HOFFMAN	00:25:52	4
LARRY LOUCKA	00:25:32	5
KEN GROVES	00:25:03	6
WALT VAN GORDER	00:19:38	7
GORDY WISNIEWSKI	00:19:26	8
PHILLIP HAINER	00:18:22	9
BOB RANDOLPH	00:10:26	10

ORNITHOPTER - COMBINED AGES

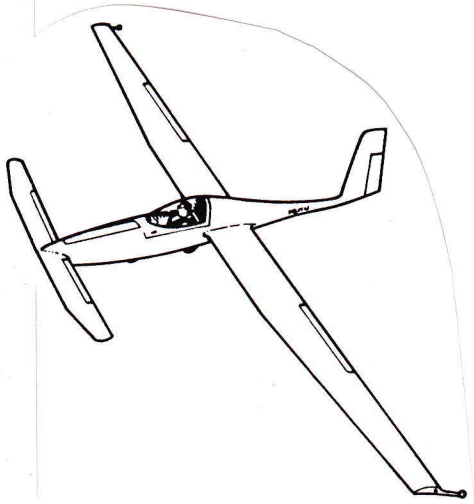
CONTESTANT	Best Flight	Place
FRANK KIESER	09:33	1
ROY WHITE	09:30	2
DON SLUSARCZYK (Sr)	08:55	3
SCOTT ROBBINS (Jr)	04:28	4
WALT ERBACH	03:15	5
PAT DESHAYE	02:38	6
GORDON POLLOCK	01:59	7
DWIGHT LARKS (Jr)	00:28	8

MANHATTAN CABIN - OPEN

CONTESTANT	Best Flight	Place
WALT VAN GORDER	10:21	1
LARRY LOUCKA	09:38	2
BOB NICHOLS	09:32	3
KEN GROVES	08:54	4
JAMES LONGSTRETH	05:26	5
STUART BENNETT	04:55	6

PENNYPLANE - OPEN

CONTESTANT	Best Flight	Place
JOE FOSTER	14:34	1
GORDY WISNIEWSKI	13:52	2
BRUCE KIMBALL	12:59	3
LARRY LOUCKA	12:29	4
HANK COLE	12:07	5
KEN GROVES	11:54	6
WALT VAN GORDER	11:53	7
BUD TENNY	10:51	8
DENNIS WEATHERLY	10:11	9
JIM CLEM	09:58	10
SHERMAN GILLESPIE	09:44	11
DOUG HANNAY	08:38	12
GORDON POLLOCK	08:35	13
BOB OPPEGARD	04:38	14



FAI INDOOR & TEAM SELECTION FINALS - MOSCOW, ID - JUL 21-23,1989-----

CONTESTANT	ROUND 1	ROUND 2	ROUND 3	ROUND 4	ROUND 5	ROUND 6	ROUND 7	ROUND 8	ROUND 9
CEZAR BANKS	00:40:59	00:41:59	-	00:39:04	-	00:41:29	00:30:10	-	-
LARRY CAILLIAU	00:34:47	00:31:34	00:37:00	00:34:26	00:40:15	00:40:13	00:29:06	-	-
BOB RANDOLPH	00:34:57	00:36:58	00:39:44	00:35:41	00:35:50	00:39:44	00:36:44	00:37:06	ATT
JOE FOSTER	00:36:26	00:39:03	00:38:18	-	00:37:54	00:35:57	00:36:17	-	00:37:56
BUD ROMAK	00:32:17	00:30:36	00:38:32	00:14:18	00:27:33	00:38:04	ATT	00:30:49	00:35:08
DON SLUSARCZYK (SR)	00:33:59	00:35:18	00:37:34	00:33:09	00:34:42	00:37:18	00:33:52	00:16:56	00:33:05
RICH DOIG	00:35:09	00:33:46	00:35:40	00:30:24	00:33:33	00:21:14	-	00:36:21	00:36:50
LARRY LOUCKA	00:19:13	-	-	-	00:33:00	00:35:24	-	-	-
EARL HOFFMAN	-	-	-	-	00:32:57	00:34:53	-	-	-
LEW GITLOW	00:32:01	00:33:47	00:33:46	00:22:36	att	00:02:09	-	-	-
HERB ROBBINS	00:02:00	00:30:39	00:25:23	00:24:45	00:25:37	00:23:35	00:32:03	-	-
HANK COLE	00:33:33	ATT	00:26:59	att	-	-	00:27:15	00:17:40	-
CLARENCE MATHER	-	-	00:31:03	00:29:06	00:28:58	00:22:09	00:23:09	00:12:38	-
DON GODFREY	00:02:26	00:09:45	00:12:05	00:26:34	00:13:36	00:26:06	00:24:36	-	-
WALT VAN GORDER	00:27:57	00:19:43	-	-	-	-	-	-	-
STAN CHILTON	00:30:24	00:12:15	00:14:18	-	-	-	-	-	-
KEN GROVES	-	-	-	00:18:00	00:22:08	-	-	-	-
BRUCE KIMBALL	00:12:40	00:13:08	00:12:33	-	-	-	-	-	-
JACK MCGILLIVRAY	00:24:21	-	-	-	-	-	-	-	-
DAN BELIEFF	att	-	00:17:55	-	-	-	-	-	-
JIM CLEM	-	-	-	-	-	-	-	-	-
DAVID ARONSTEIN	-	-	-	-	-	-	-	-	-

CONTESTANT	BEST FLIGHT	2ND FLIGHT	TOTAL (Best 2)	NATS PLACE	FINALS POINTS	REGIONAL POINTS	TOTAL POINTS
CEZAR BANKS	00:41:59	00:41:29	01:23:28	1	1000.00	100.00	1100.00
LARRY CAILLIAU	00:40:15	00:40:13	01:20:28	2	964.06	100.00	1064.06
BOB RANDOLPH	00:39:44	00:39:44	01:19:28	3	952.08	98.51	1050.59
JOE FOSTER	00:39:03	00:38:18	01:17:21	4	926.72	100.00	1026.72
BUD ROMAK	00:38:32	00:38:04	01:16:36	5	917.73	96.42	1014.15
DON SLUSARCZYK (SR)	00:37:34	00:37:18	01:14:52	6	896.96	100.00	996.96
RICH DOIG	00:36:50	00:36:21	01:13:11	7	876.80	100.00	976.80
LARRY LOUCKA	00:35:24	00:33:00	01:08:24	8	819.49	96.93	916.42
EARL HOFFMAN	00:34:53	00:32:57	01:07:50	9	812.70	93.65	906.35
LEW GITLOW	00:33:47	00:33:46	01:07:33	10	809.31	100.00	909.31
HERB ROBBINS	00:32:03	00:30:39	01:02:42	11	751.20	79.80	831.00
HANK COLE	00:33:33	00:27:15	01:00:48	12	728.43	85.47	813.90
CLARENCE MATHER	00:31:03	00:29:06	01:00:09	13	720.65	76.04	796.69
DON GODFREY	00:26:34	00:26:06	00:52:40	14	630.99	89.96	720.95
WALT VAN GORDER	00:27:57	00:19:43	00:47:40	15	571.09	75.51	646.60
STAN CHILTON	00:30:24	00:14:18	00:44:42	16	535.54	100.00	635.54
KEN GROVES	00:22:08	00:18:00	00:40:08	17	0.00	-	0.00
BRUCE KIMBALL	00:13:08	00:12:40	00:25:48	18	0.00	-	0.00
JACK MCGILLIVRAY	00:24:21	00:00:00	00:24:21	19	0.00	-	0.00
DAN BELIEFF	00:17:55	00:00:00	00:17:55	20	214.66	82.98	297.64
JIM CLEM	00:00:00	00:00:00	00:00:00	21	0.00	75.58	75.58
DAVID ARONSTEIN	00:00:00	00:00:00	00:00:00	22	0.00	-	0.00

15 Joicey Blvd.
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Sept. 13/89

Dear Jorgen,

After I received your last letter I decided that I should put some material together to assist you, knowing that you are not getting data from the Doig's. I phoned Richard Doig to get the results from the final afternoon of USIC. I have typed these up and added them as a last page to a copy of the complete results as produced by Richard and Melody right at the contest. I also obtained a copy of the results of the indoor events at the AMA Nationals held in the Kibbie Dome at Moscow, Idaho. This site is so good that the US wants to put in a bid to host the World Champs at this location as soon as possible after 1990. The description of the site was in the last INAV, and according to Jack McGillivray lives up to its advanced billing.

Richard tells me that the pressure of the family business together with the Doig's announced intention of doing as much as they can to administer the US indoor contests that very little time is available to put INAV together, hence the lack of correspondence from them. They send their regards and hope to be in touch at some point in the near future.

We held our Canadian Nats. during the first week of July and the indoor events were held on July 3 & 4. A very long report was written for Model Aviation Canada, but rather than send it to you I have put a few notes about it on one of the attached sheets. Because you said that you were going to use my report on USIC I decided to type it for you. This allowed me to correct some of the grammar and add some notes about the last afternoon's events. These are also enclosed with this letter. Finally, because Peter Kearney has had so much success with my Easy-B design, I thought you you might be interested in a copy of the plan with details of the wood used and the weights of the parts, especially as it appears to be a very easy model for a junior to build. It uses a flat wing with turned up tips, rather like the old Sunnavind glider of fond memory. It is also the first Easy-B Peter and I have built using plastic film covering, which is now allowed in this class in N. America. We were both using the new FAI Supplies tan rubber and most of our best flights were made using .065 x 20ins. long. Hope this is of interest and my apologies for the English measurements; the plans were made for Peter's two national record applications.

It is subscription renewal time again so I have enclosed a money order to keep me in your good books. Peter and I are now looking at F1D models to build and would appreciate your comments on the following

a) What are the advantages of your prop tip shape compared to the more conventional round tip?

b) Do you make a preliminary calculation of your model Neutral Point and CG? If so what method do you use and what static margin have you found to be good? What is the Polish DS method as used on Silentius by Bernd-O. Miehe?

Hope you can spend a little time to answer our questions. They may be a good subject for an article in IN, especially a comparison of the various methods.

Kindest regards,

Bill Henderson

HIGHLIGHTS OF THE 1989 U.S.I.C.

Because of the low number of juniors flying, many of the classes were flown with no junior section, some were flown with a combined junior/senior section and just three events, HLG, Catapault glider and Novice Pennyplane had separate junior, senior and open sections. Seven Canadian flyers, including two juniors, entered in most events - the total entry being around 100. Several big names did not appear, such as Jim Richmond, Ray Harlan, Stan Chilton and our own Jack McGillivray (Jack was flying on the Canadian Wakefield team in Argentina).

In HLG my pupil, Peter Kearney, took 1st. place in junior with a two flight total of 55.2secs., which compares to the 1st. place senior Jim Buxton's total of 113.2secs. and the 1st. place open Bernie Boehm's total of 134.8secs. Catapult glider (12"x3"max. wing area) attracted a large entry of over 30 people and Chuck Marcos took 1st. place with a two flight total of 153.2secs. - better than the HLG times!

Ornithopter once again produced a first place by Frank Kieser with an 11:12 best flight. Helicopter produced some very controversial results when my pupil, Peter Kearney, and I took 1st. and 2nd. places with 10:36 and 8:24. These times were achieved by having the models scrub the ceiling, but in each case they locked into the louvered panel at the centre of the roof. The top rotor stopped rotating, but the lower one continued until it did not have enough thrust to support the model against the louvre. Since this practice had been permitted last year it was allowed this year, but in future both rotors must rotate at all times for the flight to be official.

The Unlimited rubber speed saw John Thornberry take 1st. place using a slightly modified Guillow's Jetstream with lots of rubber as he did two years ago. His speed was 14.67m.p.h. compared to Chuck Marcos with 13.56m.p.h.. So it is back to the drawing board for me to see what I can do to beat the Jetstream. Chuck Marcos took 1st. place in Peanut speed with 11.21m.p.h.(unfortunately I do not know what model he was flying).

Easy-B had 60 entries with Chuck Marcos taking 1st. place with a 22:01 flight. I was only able to manage 15:39 for 17th. place. Peter Kearney on the other hand was using my design to achieve 16:33 which pushed Don Slusarczyk, as a senior, to try and beat him. He finally did with 17:09. This was a well earned second place for our junior.

Once again my Bleriot VII took 3rd. place in Peanut Scale with 88.4 scale points and 88.4secs. average time for the two best flights (U.S. rules are that flight time cannot exceed static score, but few people are able to achieve high flight times). Best scores were by Doc Martin with his Astra and Jim Miller with his Santos Dumont 14 bis. Interesting that the first three places were taken by models of aircraft that appeared before 1910. The highest placed Fike was 13th. There were 30 entries across all age groups in Peanut Scale.

Intermediate stick attracted almost 30 open class entries and the top time was 26:30 by Dan Belieff. Again my protegé, Peter Kearney, placed second behind Don Slusarcyzk in the combined junior/senior class. Manhattan, Bostonian and No-Cal were all flown in the same time slot and out of 25 entries in Manhattan, Joe Krush achieved 11:16 for 1st. place. Bostonian is very popular with 36 entries and Richard Miller had a two flight total of 7:05. The charisma factor (max. 1.20) makes the difference and this was to be seen in my battle with Dave Aronstein for 4th. and 5th. place. Dave achieved 5:55, 2 flight total, and charisma factor of 1.18 to give a score of 418.90. I achieved 6:01,2 flight total, but my charisma factor of 1.16 gave me a score of 418.76. Dave jokingly suggested that he cut his 4th. place trophy in half and give me one of the halves.

No-Cal is a fun event with simple models that are of a recognizable prototype. This event attracted 39 entries with a top time of 5:03 flying a 1930s racer, second place was taken by Canadian John Marett WITH 4:38 flying a Piper Cub and I took 3rd. place with 3:40 flying a Farman F190.

The very small ROG Stick (30 sq. in. wing area) produced a remarkable first place time of 14:37. ROG Cabin was won by Ron Ganser with 24:38 flying under very difficult conditions at the same time as the first three rounds of F1D (see below). Novice Pennyplane attracted 69 entries in the open section alone, the biggest entry of any event at this year's USIC. The top time of 12:27 was produced by Bob Champine who has just come back after a very long lay-off (over 30 years). Peter Kearney took first place in junior with 9:46, which was only 2secs. behind Don Slusarcyzk's 9:48 first place in the senior section.

F1D was run over two afternoons, 3 rounds each afternoon and as luck would have it, it rained heavily each day in the middle of the F1D timeslot. On the first day the rain was so heavy that the louvre panel in the centre of the ceiling leaked like a sieve and large puddles formed in the centre of the floor. The cooling effect on the roof made the air unstable and heavy and the times reflected this, nonetheless Richard Doig managed two very consistent flights of 35:32 and 35:10. Don Slusarcyzk came second with 30:59 and 29:39. AMA Stick and AJI Old-timer were flown together with the second afternoon of F1D and in these events Don once again appeared in the winners list with 1st. place senior in AMA Stick based on a time of 35:21, and 1st. place in the AJI Old-timer event with a 26:51 flight. Richard Doig took 1st. place open in AMA Stick with an identical time to Don. Don will be a force to be reckoned with when he moves into the open category next year.

For the second time, Ken Groves of Canada took the Grand Champion award by achieving at least 90% of the winners times in the 7 events he nominated prior to the start of the meet. Peter Kearney took home six awards, not bad for a new junior who has only been building indoor models for 9 months! He also set several new junior Canadian records. My helicopter time becomes a new Canadian open record in this event.

NOVICE PENNYPLANE - OPEN

47 ENTRIES

Name		1	2	3	4	5	Best Flight	Place
Bob	Champine	08:30	02:41	12:27	-		12:27	1
Richard	Miller	12:07	08:57	12:16	10:34	08:48	12:16	2
Chuck	Markos	11:52	11:45	11:57	11:20	-	11:57	3
Walt	Van Gorder	10:56	09:47	08:44	10:21	11:57	11:57	4
Phil	Hartman	08:59	11:00	09:05	10:00	11:51	11:51	5
Tom	Vallee	10:35	11:06	11:50	11:01	-	11:50	6
John	Voorhees	10:10	10:29	11:28	-		11:28	7
John	Barker	09:17	02:14	11:27	-		11:27	8
Ken	Groves	09:53	11:25	11:27	09:47	10:52	11:27	9
John	Marett	09:57	11:23	10:49	-		11:23	10

PEANUT SCALE -OPEN

27 ENTRIES

Name		Subject	BEST FLIGHT	2ND FLIGHT	AVERAGE BEST 2	SCALE POINTS	TOTAL POINTS	PLACE
John	Martin	Astra	97.2	92.8	95.0	97.2	192.2	1
Jim	Miller	Santos Dumont 14 bis	85.8	83.2	84.5	105.4	189.9	2
Bill	Henderson	Bleriot VII	88.4	88.4	88.4	88.4	176.8	3
Ken	Groves	Bristol Scout D	61.0	60.0	60.5	112.5	173.0	4
Dick	MacEntee	Contestor	83.4	77.0	80.2	89.4	169.6	5
Jim	Miller	1911 Voisin Hydroplane	52.4	49.0	50.7	116.4	167.1	6
Howard	Henderson	J3 Cub	78.8	75.9	77.3	78.8	156.2	7
Stu	Weckerly	Santo Dumont 14 bis	78.0	78.0	78.0	78.0	156.0	8
Tom	Nied	Bucker Jungman BU131	71.2	70.2	70.7	84.8	155.5	9
Dave	Aronstein	Mauboussin	76.8	76.8	76.8	76.8	153.7	10

EASY B-OPEN

48 ENTRIES

Name		1	2	3	4	5	Best Flight	Place
Chuck	Markos	09:17	22:01	15:04	05:20		22:01	1
John	Marett	18:41	15:07	18:36	20:38		20:38	2
Walt	Van Gorder	att	15:45	19:40	20:35		20:35	3
Andy	Tagliafico	19:06	20:22	20:23	08:31	07:41	20:23	4
Les	Garber	19:56	13:24	16:17	06:25	14:34	19:56	5
Richard	Miller	19:05	19:50	14:10	19:10	15:00	19:50	6
Gordy	Wisniewski	19:07	04:48	07:44	18:43	19:36	19:36	7
Ken	Groves	14:25	13:40	18:40	13:29	12:18	18:40	8
Jim	Grant	18:09	15:54	18:39	04:31		18:39	9
Wally	Simmers	07:25	07:26	08:06	12:59	16:22	16:22	10

HAND LAUNCH GLIDER - OPEN

10 ENTRIES

Name		1	2	3	4	5	6	7	8	9	Best Flight	2nd Flight	TOTAL (BEST 2)	PLACE
Bernie	Boehm	62.0	68.4	66.4	62.2	61.0	58.0	58.2	60.2	59.4	68.4	66.4	134.8	1
Charles	Gagliano	39.2	61.4	64.4	58.4	34.2	44.4	36.8	52.0	63.6	64.4	63.6	128.0	2
Bill	Schlarb	48.0	53.2	52.8	51.0	35.0	49.0	48.0	46.2	-	53.2	52.8	106.0	3
Chuck	Slusarczyk	46.6	48.6	48.2	40.0	50.2	52.0	41.8	34.2	28.8	52.0	50.2	102.2	4
Jesse	Shepherd, Jr	36.2	43.4	44.8	49.8	45.6	44.8	5.4	29.0	45.4	49.8	45.6	95.4	5

MANHATTAN CABIN - COMBINED AGES

17 ENTRIES

Name		1	2	3	4	5	Best Flight	Place
Joe	Krush	08:05	10:08	10:16	11:16		11:16	1
Larry	Loucka	08:20	10:14	10:39			10:39	2
Chuck	Markos	09:39	10:20	10:38	03:11		10:38	3
Walt	Van Gorder	09:21	att	10:29	10:21	10:23	10:29	4
Don	Slusarczyk (Sr)	09:24	09:00	09:32	10:28		10:28	5

BOSTONIAN

28 ENTRIES

Name		1	2	3	4	5	BEST FLIGHT	2ND FLIGHT	TOTAL BEST 2	CHARISMA	TOTAL	PLACE
Richard	Miller	03:27	03:38	03:09	03:11	03:09	03:38	03:27	07:05	1.18	501.50	1
Wayne	Trivin	03:14	03:19	03:19	03:37		03:37	03:19	06:56	1.15	478.40	2
John	Marett	03:20	02:31	02:33	03:09		03:20	03:09	06:29	1.16	451.24	3
David	Aronstein	02:39	02:34	02:31	03:03	02:52	03:03	02:52	05:55	1.18	418.90	4
Bill	Henderson	02:37	02:59	03:02	02:51	02:46	03:02	02:59	06:01	1.16	418.76	5

PENNYPLANE - OPEN

27 ENTRIES

Name		1	2	3	4	5	Best Flight	Place
Chuck	Slusarczyk	04:17	01:01	15:05	12:35	05:05	15:05	1
Larry	Loucka	12:31	12:43	14:51	14:09	-	14:51	2
Gordy	Wisniewski	13:01	14:20	13:53	13:56	14:47	14:47	3
John	Marett	11:50	10:55	14:29	13:51	-	14:29	4
Joe	Nuszer	att	06:14	12:55	11:49	14:19	14:19	5

CATAPULT GLIDER - OPEN

24 ENTRIES

Name		1	2	3	4	5	6	7	8	9	Best Flight	2nd Flight	TOTAL (BEST 2)	PLACE
Chuck	Markos	70.0	74.0	69.4	58.8	74.0	77.8	70.8	75.4	73.8	77.8	75.4	153.2	1
Bob	Warmann	72.6	67.8	66.6	6.2	6.4	18.6	42.4	12.0	56.8	72.6	67.8	140.4	2
Bill	Schlarb	67.2	60.2	69.2	68.0	65.0	64.8	68.8	71.0	68.0	71.0	69.2	140.2	3
Ralph	Schlarb	60.2	63.2	60.4	67.0	67.6	69.8	68.8	69.8	59.0	69.8	69.8	139.6	4
Jesse	Shepherd, Jr	60.6	46.0	37.4	65.2	51.2	14.0	71.0	59.2	28.6	71.0	65.2	136.2	5

NOTES ON THE CURRENT CANADIAN SCENE

Indoor appears to be picking up interest across Canada with active groups in Vancouver, Regina, Winnipeg, Toronto and St. John's, Newfoundland. This last group flew a one design contest with the San Diego Scale Staffle using the Peck Polymer, Prairie Bird and much to their suprise the St. John's group best the San Diego club. This resulted in a return challenge for this October when both clubs will be flying the Bostonian Pup model also by Peck Polymers.

A new cross-Canada postal contest will start in September with four events; Peanut Scale, No-Cal Scale, Novice Pennyplane and Helicopter. No scale points will be applied, but all models must meet the appropriate size restrictions.

Indoor was a feature at the Canadian Nationals again this year and were held in a 35ft. high hockey arena near London, Ont. and close to all the other outdoor events. Although the entry was small there was very competitive flying which tried to avoid the hanging lights spaced about 20ft. apart and coming down to about 27ft. above the floor. Many people succeeded in doing just that and completed flights without hang-ups.

FAC Peanut Scale

1) Jack McGillivray - Volksplane 138.5 pts
2) Stu Weckerly - Santos Dumont 138
3) Ken Groves - Bristol Scout 119
4) Paul Truupere - Jungmann 116
5) Chris Brownhill - Lacey M10 103

Novice Pennyplane

1) Ken Groves 8:19
2) John Marett 7:38
3) Jack McGillivray 7:27
4) Stu Weckerly 5:48
5) Peter Kearney (Jr) * 4:51
6) Marc Yealland (Jr) 4:47

* Top Junior awarded to

Manhattan Cabin

1) Ken Groves 6:20
2) John Marett 4:34
3) Peter Kearney (Jr) 4:06

Easy B

1) Richard Miller 12:27
2) John Marett 11:12
3) Peter Kearney (Sr) 10:37
4) Jack McGillivray 10:34
5) Marc Yealland (Jr) * 10:07
6) Stu Weckerly 8:57
7) Ken Groves 8:08

* Top Junior awarded to

Penny Plane

1) Ken Groves 8:03
2) John Marett 7:16
3) Peter Kearney (Jr) 6:31
4) Marc Yealland (Jr) 5:28

Bostonian

1) Richard Miller 375.57 pts
2) John Marett 330.60
3) Chris Brownhill 255.00
4) Stu Weckerly 227.36
5) Peter Kearney (Jr) 185.76
6) Frank Coates 180.12
7) Marc Yealland (Jr) 122.96

Intermediate Stick

1) Ken Groves 11:47
2) John Marett 11:30
3) Peter Kearney (Jr) 7:43
4) Marc Yealland (Jr) 3:37

Handlaunch Glider

1) Tony Mathews	78,4 sec
2) Peter Kearney	55.8
3) Stu Weckerly	53,4
4) FRANK LOATES	—

OPEN FAC SCALE

1) KEN GROVES – BRISTOL SCOUT	135 pts
2) JACK McGILLIVRAY – CURTIS HAWK P1	129
3) CHRIS BROWNHILL – LACEY M10	113
4) PAUL TRUDEAU – BABY ACE	83



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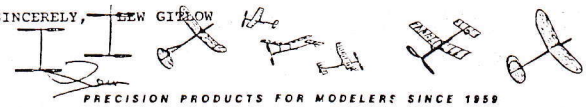
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Bruno Waechter, D

...Enclosed is a dwg of my latest double-stick and boron-free F1D Beginner model.
...In the dwg of my sanding apparatus I would like to advice you not to make the holes bigger than 2 mm when saning the thin boom wood. 3-4 mm is okay for thicker wood sizes.

Leif Englund, SF ..... Leningrad April 16 1989!!

The contest was held in a football (soccer) arena with a ceiling of about 25 meters, though in some places a little less.

There were 47 competitors with 4 from Finland, 3 from Hungary and 3 from Poland. The rest were from Russia, amongst them some under ten (10!) years with real F1D models. Even a girl and a young lady were flying.

The foreign teams were specially invited and it was my impression that the Russians wanted to know if the site would be sufficient for a coming European Championship. Further this was an event where the home fliers could gain some international experience before trying to compete at the World Ch. The arrangement itself was high quality with nice hotels etc.

The weather outside was very bad and this affected the climate indoors so it was very turbulent. As a matter of facts gusts (!) damaged many models and Pentti Nore had his wing totally destroyed by a "hurricane".

The flying therefore was no pleasure but I could see that the Russians will soon take good placings in F1D .....

Results were published in IN 3/89.

35 cm - a class worthy of interest.

A contribution by Bernard Aslett, UK.

He writes: I have always had more than a passing interest in the 35 cm microfilm class, indeed, my first film model (against better advice) had been this size. It proved to have more patches than undamaged film - and this before it flew!

British top times had reached 22 minutes by 1978 with models of long moment arm and often well exceeding 0.5 gm. In the Jan/Feb '78 INAV was published Mark Drela's design that had achieved 26:23 in one of the Lakehurst sheds 20 Aug 78 (this was not a case of precognition - INAV was already considerably in arrears). His approach was considered when later planning a new design and in Aug 81 a time of 26:10 was achieved, with 400 turns remaining.

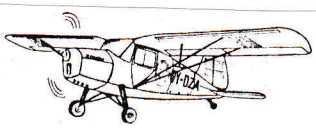
For a variety of reasons, further attempts were put aside until 1984. A new design rejected the stability of the longer moment arm in order to achieve lower weight. An incidental advantage of lower weights was a much more manageable launch torque - earlier designs had often assumed a 90° bank for the first two circuits!

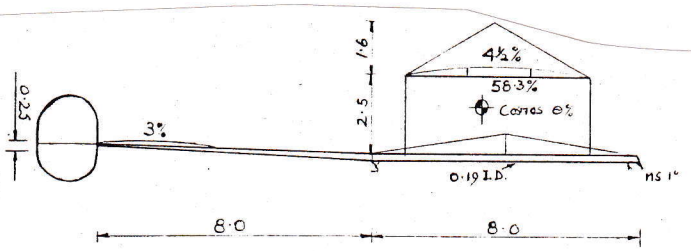
The '84 design achieved 27:03 on 2nd Sep '84 and to the best of my knowledge has not yet been exceeded. Some description of the flight might be in order.

The model was definitely high causing two or three sneak touches of the girders and finally "dead-stuck" at approx. 60'. The motor had in fact, been prepared for the 1981 model and simple calculations suggest that a similar cross-section motor of 14.5-15" length would have allowed less than roof height and a flight time to exceed 30 minutes - a time that is thought to be within the capability of this class.

For motors of this small size a Polish or a Harlan stripper (with sharp cutters) is necessary in order to gain a uniform cross section.

A further note, I was sufficiently interested in this design to enlarge it to 65 cm - giving a wing chord of 10.4"/26.5 cm. Although achieving 40+ on one occasion, it was discarded as being too floppy for regular contest use.





PROP. 12×22

MOTOR 0·43gm. × 13 LOOP

LAUNCH 2290 TURNS

BACK OFF 11·0 TURNS

2290 USED AV. RPM. 847

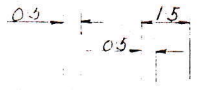
WEIGHTS

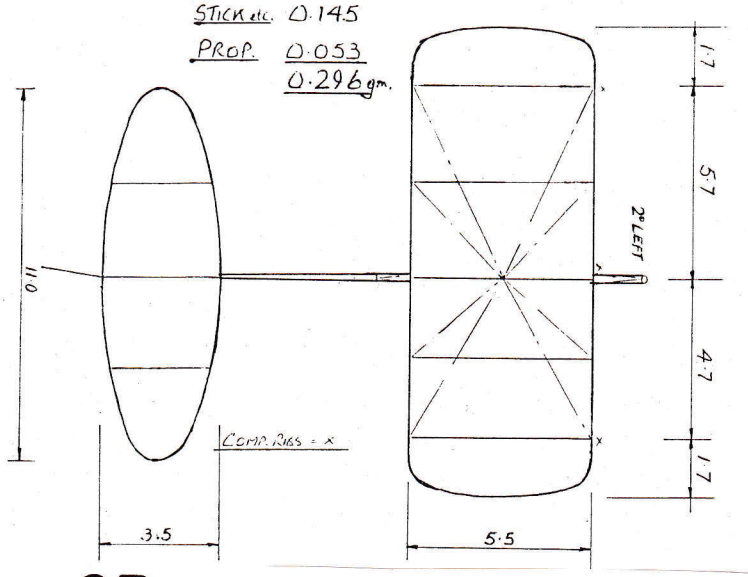
WING 0·098

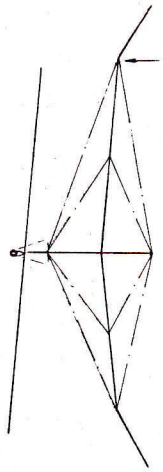
STICK etc. 0·145

PROP. 0·053

0·296 gm.

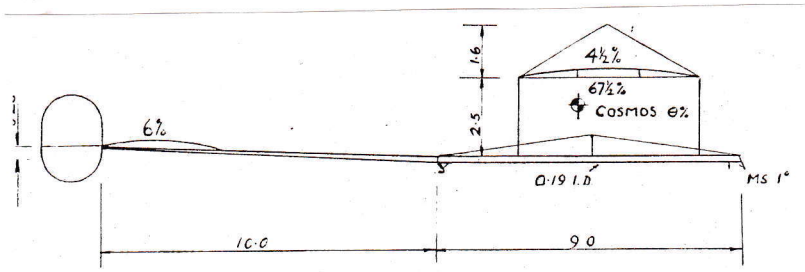






35cm - BERNARD ASLETT - 27.03 - 02 SEP. '84

CARDINGTON NO. 1 SHED - 25·5°C.



PROP. 12×22

MOTOR 0·44gm. × 14 LOOP

LAUNCH 2680 TURNS

2250 USED AV. RPM. 85·4

BACK OFF 40 TURNS



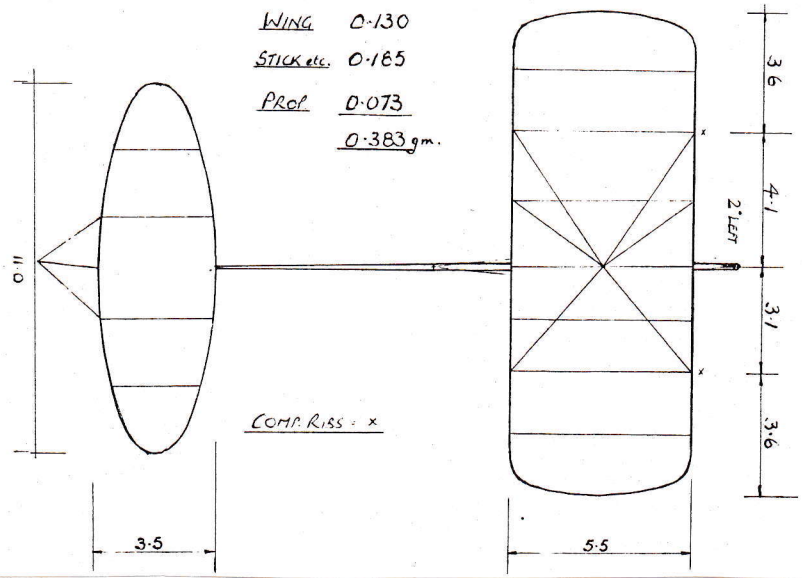
WEIGHTS.

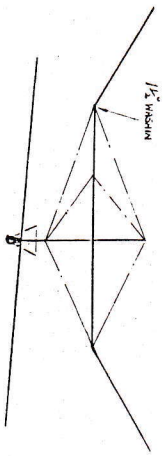
WING 0·130

STICK etc. 0·185

PROP 0·073

0·383 gm.





35cm - BERNARD ASLETT - 26.10 - 30. AUG. '81

CARDINGTON NO. 1 SHED. - 25·5°C.

PITCH INTO THIS !.

Reg Boor.

With the advent of "open P-15" we in NORWIND are allowed to modify, or even make, a propeller. Provided that it is plastic and not more than 5.5 inches in diameter.

This has set a lot of us thinking about propeller pitch so I thought that a few words on the subject in general might be useful.

Throughout, we shall be discussing the geometric pitch distribution, i.e. the distance moved forward in one revolution as if the propeller was in a solid medium. Like a wood-screw say. The subjects of inflow factor, slip etc. are not considered. It is my opinion anyway that the aeromodeller deals with these things in a very empirical way by choosing from experience a "pitch to diameter" ratio for the class he is flying.

So, we shall call pitch 'P', diameter 'D', radius 'R', a distance from the shaft along the blade 'r' and the pitch angle at any point 'a'. The pitch angle, of course, is the angle between the plane of rotation and the local blade aerofoil. At the shaft it is always 90 degrees.

Now, without going into the maths, which is available if anyone would like it, the formula which gives the pitch angle at any radius for a helical distribution is:-

$$\text{TAN}(a) = (P/D)/PI*(r/R) \quad _1.$$

Where, (P/D) is the pitch to diameter ratio, PI=3.142 and (r/R) is the fractional radius. For instance, (r/R)=0.5 is half way along a blade. So, choosing the (P/D) we can run through (r/R) from zero to 1.0 and plot the helical pitch distribution. This is done on figure 1 for (P/D) of 1.0 and 2.0.

What I want to do now is examine the difference between this ideal pitch distribution and what it looks like if we twist a propeller to increase its pitch or make one from a yoghurt carton !.

The (P/D) of a standard "Sleek-streak" 5.5 inch prop is about 1.2 and the distribution is helical as near as I can measure it. Suppose we wish to increase this to 2.0, a value favoured by indoor duration modellers. It depends how we do it, of course. Let us adopt the method described by John O'Donnell in his April Aeromodeller article in which he rotates a point on the blade to a new angle.

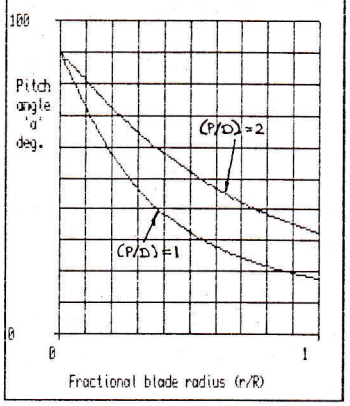
Which point and what angle?. Well, John's method relies on the observation that TAN(45) equals unity, one, or 1.0. Then our formula, equation 1, is much simplified because the left hand side of the equals sign becomes 1.0 and we can re-write the equation in terms of (r/R):-

$$(r/R) = (P/D)/PI \quad _2.$$

If now we choose our (P/D) ratio and divide it by 3.142 we get the fractional blade radius at which the blade angle should be 45 degrees, simple,isn't it ?.

In John's case he sets 45 degrees 1.75 inches from the shaft. His pitch is 11 inches, giving a (P/D) of 2.0 (11 divided by 5.5) and

Figure 1. Pitch distribution for (P/D) of 1 and 2



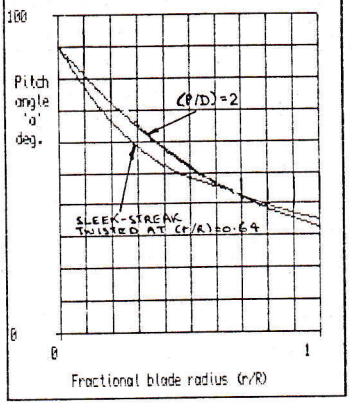
2.0 divided by 3.142 gives an (r/R) of 0.64. To complete the circle, 0.64 times 2.75 (the prop radius, R) equals 1.76 inches. So, we know how to do the maths but we still have to bend the propeller !.

First of all, what is the blade angle at (r/R)=0.64 of the original prop ?. We can find this by using equation 1 i.e.-

a = ATAN(1.2/PI*0.64) = 30.8 degrees. Let us say 31 degrees.

It seems reasonable to guess that the whole of the blade outboard of the 0.64 point is twisted by (45-31) or 14 degrees and that at the shaft there is no twist at all. Figure 2 compares the ideal helical pitch distribution for a (P/D)=2.0 propeller with the (P/D)=1.2 propeller twisted to (P/D)=2.0 with the above assumptions.

Figure 2. (P/D)=2 helical and 1.2 twisted to 2



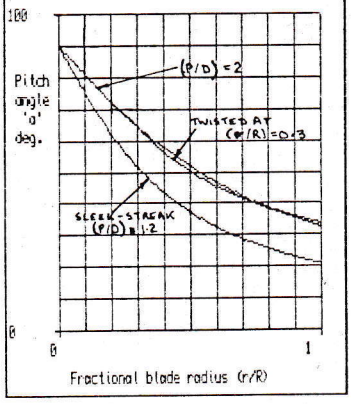
Well, as you can see from looking at figure 2, outboard of (r/R)=0.64 the twisted propeller is not too bad an approximation to what we wanted, but inboard it is not so good. Can we improve this ?. Is it better to twist the blade about some other value of (r/R) ?, and how do we find it ?.

The way to do it,with or without a computer, is to draw the graphs of the two (P/D) ratios (1.2 and 2.0) using euation 1, trace the graph of the 1.2 curve and slide the tracing vertically along the pitch angle axis until you get the best fit. The traced curve will cross the (P/D)=2 curve twice, choose the crossing nearest to the shaft and twist the propeller at that point.

Figure 3 shows the result. The old faithful (P/D)=2 curve is drawn as our reference and also the (P/D)=1.2 Sleek-streak, so that you can try the tracing technique if you feel inclined. The other curve, which is very close to to the reference, is the Sleek-streak twisted to 65 degrees(actually 64.77) at an (r/R) of 0.3. This is about 21 millemetres from the shaft.

I haven't drawn the inboard portion of the twisted propeller between (r/R)=0.3 and the shaft but I have looked at it and nowhere is it more than 2 degrees away from the reference.

Figure 3. Optimising the point and angle of twist



Now then, the yoghurt carton propeller, or any other carton, or propeller moulded on a cylindrical former. How close to helical is its pitch distibution ?.

There are some more variables invloved. The propeller blank is not laid along the axis of the carton but, for a right-handed propeller, at an angle sloped leftwards up the carton. We shall call this angle 's' (for slope). Also there is the diameter of the carton, call this 'd'.

But first of all does the taper of the carton matter ?. Yes and no. Viewed from one end all the circles of the carton are concentric and tangents are parallel so from this point of view the taper doesn't affect the pitch distribution. What it does affect is the local blade camber and so, indirectly, the pitch, but nobody seems to worry about the effect on pitch of blade camber despite the fact that it must effectively increase it.

However, the formula for calculating the difference in blade pitch along a blade is:-

$$\Delta(a) = (r/R)\,(D/d)\,\mathrm{SIN}(s) \quad 3.$$

We write $\Delta(a)$ because this is not the actual blade pitch, to it has to be added some setting angle to make a propeller. For instance, if we decided to set the carton blade at 90 degrees at the shaft the formula for actual blade pitch would be:- $a = 90 - \Delta(a)$ (57.3) , or in full $a = 90 - (r/R)\,(D/d)\,\mathrm{SIN}(s)$ (57.3) . The 57.3 factor is to make 'a' into degrees. Note that the pitch to diameter ratio doesn't appear in these formulae but the propeiler to carton diameter ratio (D/d) does. If you want to set the blade at some other angle to coincide with a point on the (P/D)=2 curve the formula is a little more complicated. Let us take the original idea and set it at 45 degrees at (r/R)=0.64, then:-

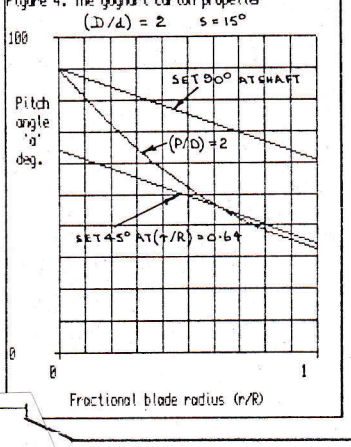
$$a = 45 + (0.64 - (r/R))\,(D/d)\,\mathrm{SIN}(s) \quad (57.3)$$

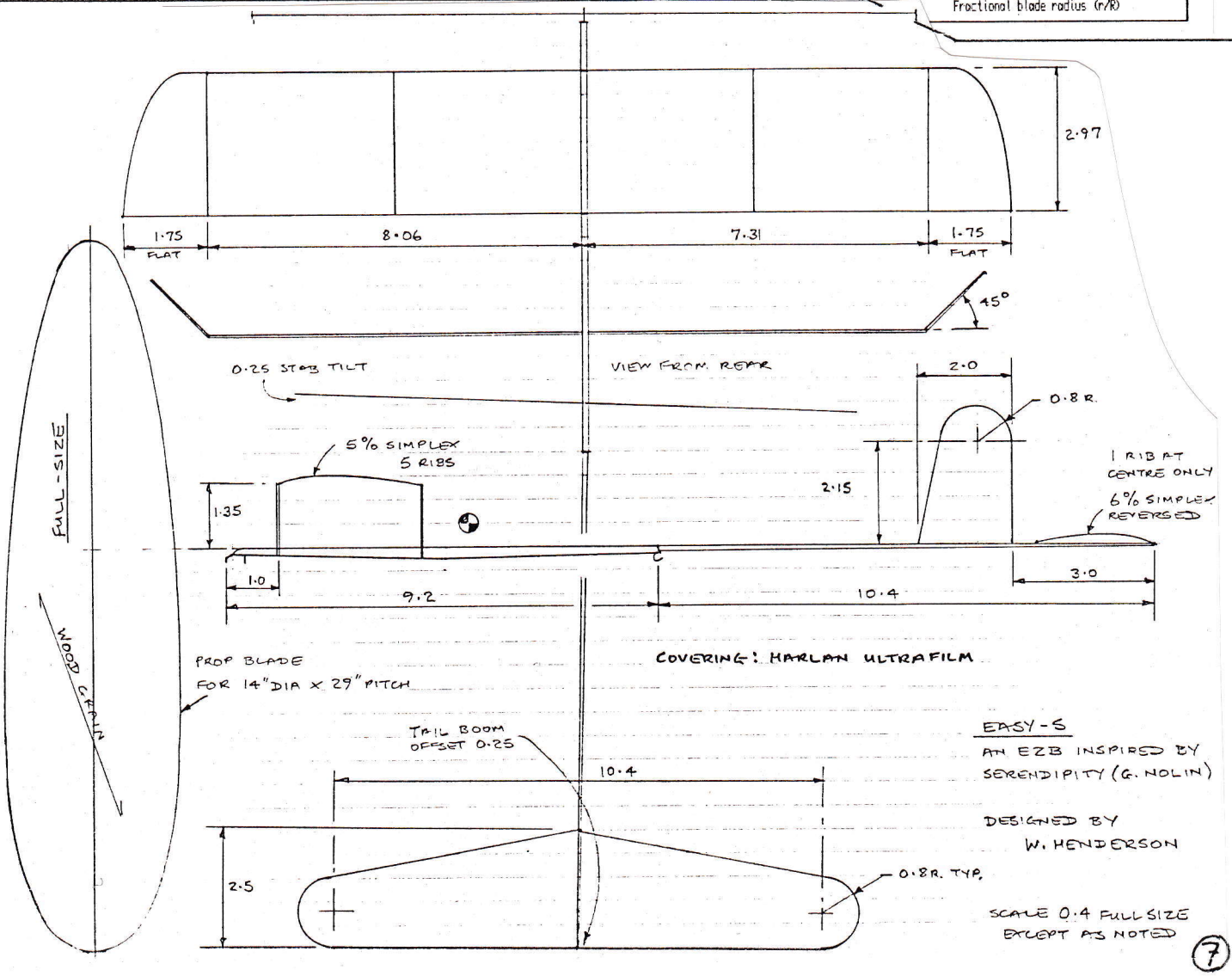
For the last figure we shall plot the two carton propellers described above assuming a propeller to carton diameter ratio (D/d) of 2.0 and a slope angle of 15 degrees. In addition, our usual (P/D)=2 line is drawn on the graph for reference. Have a look at figure 4.

It is obvious that setting the blade for 90 degrees at the shaft is hopeless. There is not enough pitch change between the shaft and the propeller tip. But the blade set at 45 degrees at (r/R)=0.64 is much better and is quite good outboard. Can these be improved ?. Only by increasing either the propeller to carton diameter ratio (bigger prop/smaller carton) or the slope angle. In either case you begin to get a very funny propeller because the blade wraps around the carton too far.

None of the approximations that we have discussed seem to stop these propellers working though !.

Figure 4. The yoghurt carton propeller (D/d) = 2 s = 15°





EASY-S (ALL DIMENSIONS IN INCHES)

STRUCTURE

WING	SPARS	.032 x .065 → .057 (AT DIHEDRAL JOINT)	6 LB/FT³	B GRAIN
	TIPS	.032 x .040 → .027 (AT TIP)	4.75 LB/FT³	A/B GRAIN
	RIBS	.028 x .032	5.75 LB/FT³	C GRAIN
STAB	SPARS	.022 x .032	6 LB/FT³	A GRAIN
	RIBS	.028 x .032	5 LB/FT³	C GRAIN
FIN	OUTLINE	.021 x .025	5 LB/FT³	A GRAIN
MOTOR STICK		.200 x .125 → .150 x .070 (BOTH ENDS)	4.7 LB/FT³	C GRAIN
BOOM		.110 x .070 → .060 x .060	4.7 LB/FT³	C GRAIN
PROP	BLADES	.012	5.5 LB/FT³	C GRAIN
	SPAR	.060 x .060 → .030 x .030	6.5 LB/FT³	A GRAIN
	SHAFT & REAR HOOK	.013 DIA	MUSIC WIRE	

WEIGHTS

WING	0.26	C.G. 0.875 AFT OF WING T.E.
FUSELAGE & STAB	0.56	
PROP	0.27	
TOTAL	1.09 GRAM.	

HOLDS THE FOLLOWING RECORDS IN CANADA

EASY-B	JUNIOR	CATEGORY IV CEILING	16:33
EASY-B	JUNIOR	CATEGORY II CEILING	10:37

Bad bags give bad rubber ....

From Bob Bailey, UK.

The impact of Manny's letter on storage of rubber in self-sealing bags was discussed at out Indoor Nats meeting. Laurie Barr suggested an easy test for rubber to see if it has been adversely affected. Tie a knot in the rubber (used or fresh) and pull hard. Easy breakage means that it has been affected.

I have stored motors in clear polythene self-sealing bags for a long time. I carried out Laurie's test on all motors and all my unused Pirelli. Most, but not all og the motors failed, and an unused batch of rubber, also kept in a thick clear polythene bag failed also. All of the unused rubber that has been keppt in crinkly opaque plastic bags passed this test which I believe is Stringent.

A straight pull on the strip does not produce the same result.

All failed motors were promptly discarded and the unused failed rubber has been relegated to general purpose (No, I have no grape vines in the garden!)

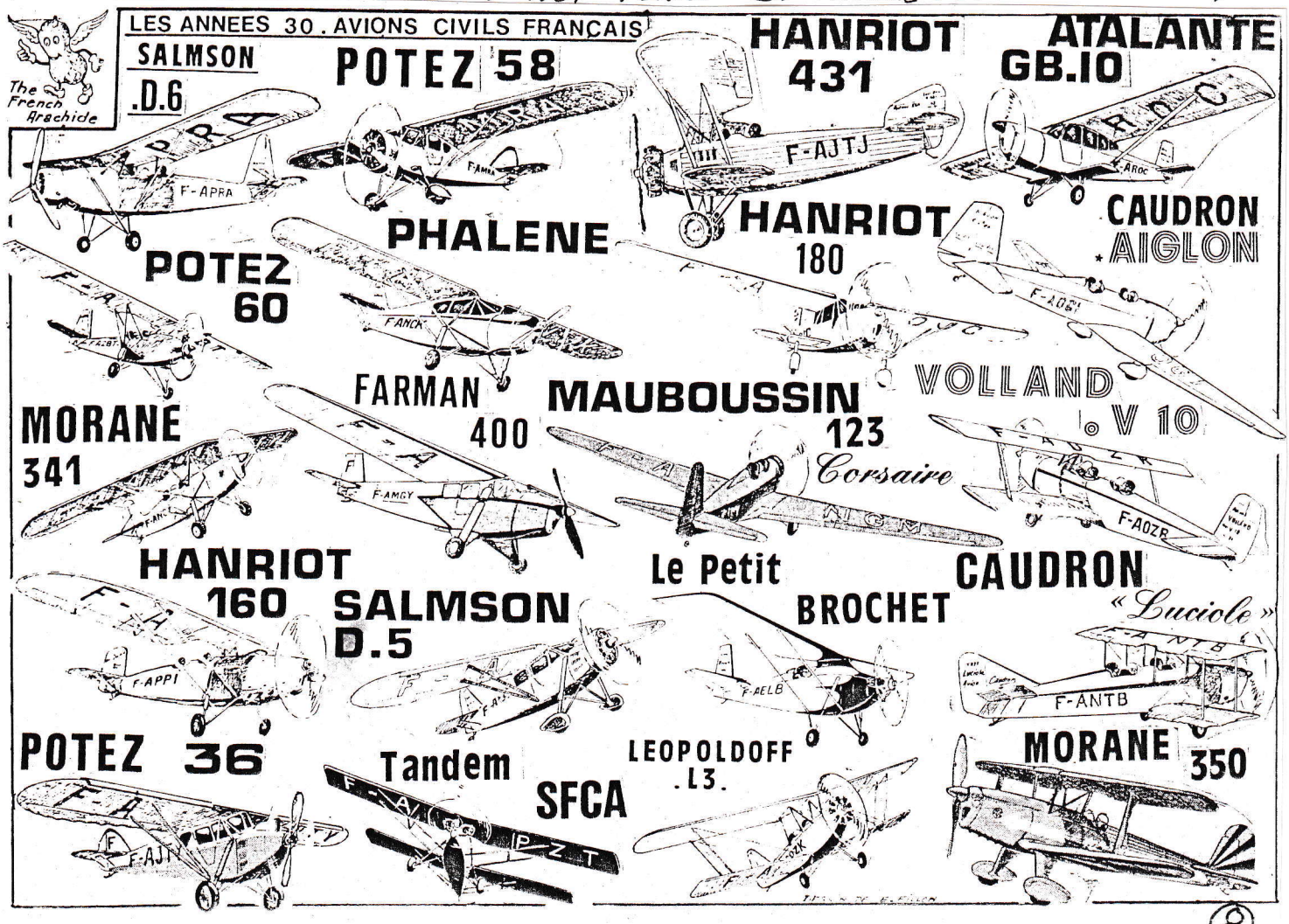
I discussed this storage problem with Denis Pepperell of St. Albans Club who has many years experience in manufacture of and working with plastics. He told me that:

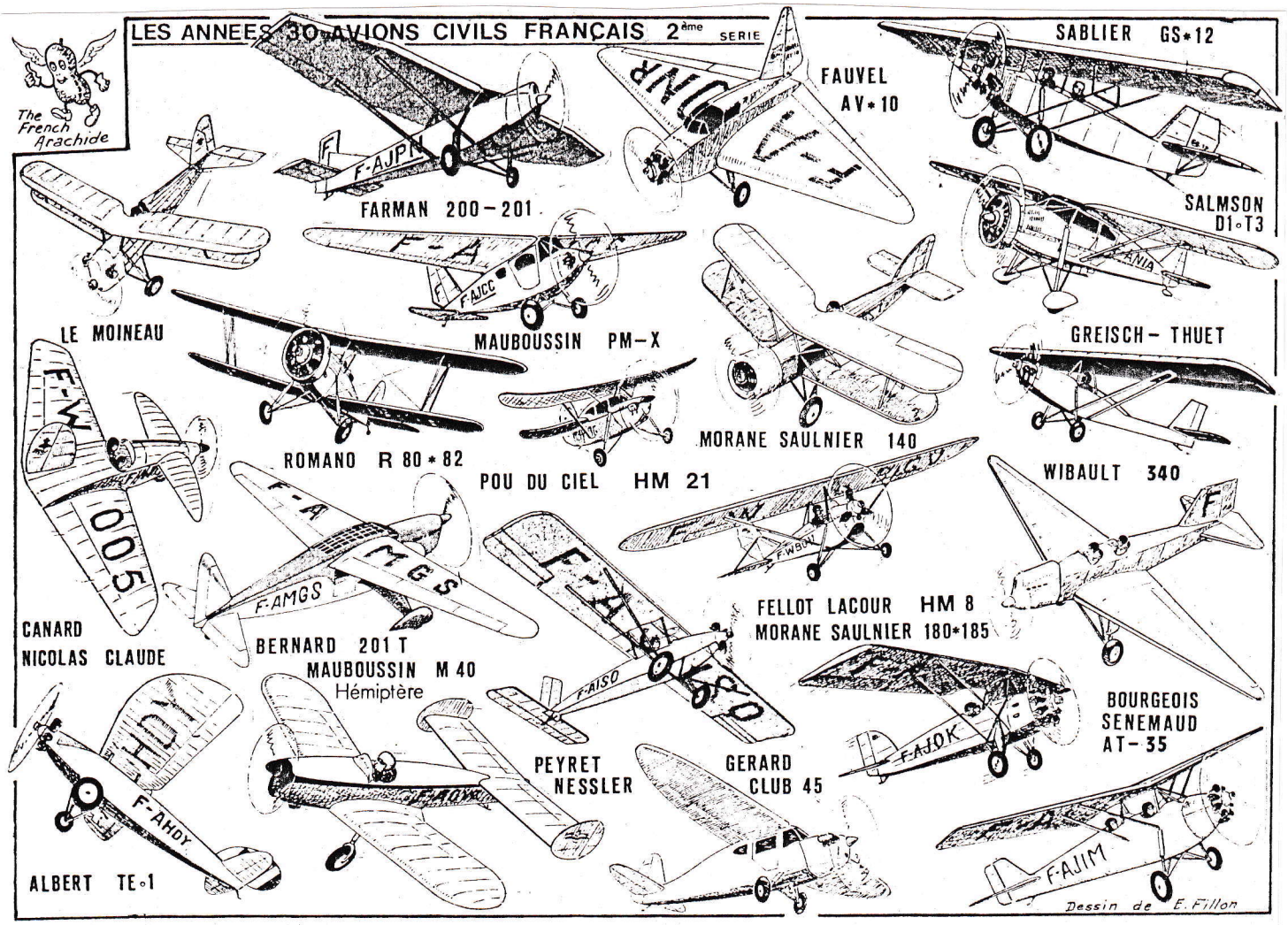
A) The crinkly plastic (usually supplied by British supermarkets) which seems good, is, in fact, High Density (HD) polythene whereas the clear (and bad) is Low Density (LD). He believes that the additives used in manufacture of LD plastic are responsible for this problem.

B) The additives, some of which remain on the surface, can be washed off with soap and water. The polythene should then be usable. This is supported by my experience with the self seal bags, some of which have been reused many times and did not degrade the rubber. Possibly all the surface additives had been removed by previous use.

I hope this information will be of use to others in terms of more consistent performance of their rubber motors.

E. FILLON P-NUT PLANS EN MASSE . . . →





PEANUT PLANS EN MASSE.. E. FILLON

PLANS de MAQUETTES VOLANTES taille "PEANUT"

ENVERGURE : 13" - 330 mm OU LONGUEUR : 9" - 230 mm
TIRAGE FORMAT : A3 = 297 x 420

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Série spéciale sur le thème : AVIONS CIVILS FRANÇAIS DES ANNEES : 30

Monoplans Parasols	Salmson D6 "Criri"	Biplans	Hanriot 431
	Potez 60 "Sauterelle"		Biplan Volland V 10
	Morane 341		Caudron "Luciole"
	Hanriot 160		Léopoldoff "Colibri"
Monoplans Cabine	Potez 36	Sesquiplans Cabine	Hanriot 180
	Potez 58		Atalante GB 10
	Caudron 410 "Phalène"	Monoplans Aile basse	Caudron "Aiglon"
	Farman 400 - 404		Mauboussin "Corsaire"
	Salmson D5	Monoplaces	Petit Brochet
Tandem	Peyret "Taupin" SFA		Morane 350

AVIONS CIVILS FRANÇAIS DES ANNEES : 30 SUITE 1

Biplans	Morane Saulnier 140	Parasol	Farman 201
	Romano R80	Monoplans Cabine	Bernard 201
	Le Moineau		Maubousin X
	Bourgeois Senemaud		Gérard Club 45
	Peyret Nessler		Salmson "Phrygane"
Monoplans Parasols	Sablier biplace	Formules Spéciales	Pou du Ciel HM 21
	Albert TE 1		Fauvel AV 10 (2 formats)
	Fellot Lacour		Mauboussin "Hémiptère"
	Greisch Thuet		Canard Nicolas Claude
	Morane Saulnier 180	Aile basse	Wibault 344

Autres plans sur 1 Format A3

Monoplans	J. Poullin J.P.20 Globe Trotter	Biplan	Albatros D Va
	Blériot Gouin XI	Monoplans	Caudron 450 Coupe Deutch
	Blackburn Airedale		Prest Baby "Pursuit"
	Renard R 31	Parasols	Brochet MB5o. Pipistrelle
	Stinson Modèle O		Boisavia B80 Chablis
	Fike Modèle E		Renard R 33
		Monoplan	DAYTON WRIGHT RACER

Plans sur 2 Formats A3 . Pour certains plusieurs variantes par plan *

* Biplan : Poli Karpow P02. U2. S13	Biplans Bréguet XIX Point d'Interrogation
* Parasol : PZL P7a . P8/11 . P24g	" Ray Hegys "Chuparosa"
* Monoplan Dewoitine 500. 501. 510	" Gotha 145
* Aile basse "Spitfire" MK VIII. XIV XIX	* " Hawker Fury II . Spanish . High Speed

Appareils autres que Maquette "Peanut"

Le "Big Bozom" avion d'intérieur cat SAINTE FORMULE .
La "Ratapenate" appareil experimental à aile battante
L'Hélico" modèle d'helicoptère genre Bell
Le "Soufflant" appareil à réaction à turbine Tangentielle ← 2 formats
Le Camille . modèle de début cat SAINTE FORMULE
L'ATROU . modèle en Styrofoam début . cat SAINTE FORMULE

RETRO

Cinquantenaire WaKefield 1937. sur Formats A4 (210 x 297)
22 plans trois vues Echelle 1/5e de WaK ayant participé à la Coupe WaK 37
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20 plans sur 20 formats = 150 F

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1 plan sur 1 format = 10,F40
1 plan sur 2 formats = 16,F80

SWEDISH NATS 1989

1 april, den 30 flög vi SM i klasserna 25-öres och Pea-nut här i Örebro.

25-öres senior.

1. Sven Pontan	10.40	+ 10.40	= 21.20
2. Jonas Romblad	10.19	+ 10.20	= 20.39
3. S.-O. Lindén	7.07	+ 7.06	= 14.13

25-öres junior.

1. Pär Lund	3.12	+ 2.57	= 6.09
2. Thomas Larsson	1.40	+ 2.00	= 3.40

Pea-nut senior

1. Lars Tolkstam	Fike E	skala 117 p	flyg	1.12 + 1.13
2. Georg Törnkvist	Zippy	105		1.14 + 1.03
3. Jonas Romblad	Gossamer Condor	81		1.20 + 1.12

Pea-nut junior

1. Pär Lund	Lacey	102		.52 + .52
2. Ola Ljunggren	Lacey	90		.36 + .40
3. Johan Svanestrand	Piper J3 Cub	105		.28 + .25

Le biplace RENARD R.33

Avion de tourisme Belge de 1932

Deux prototypes l'un à moteur Renard 120 cv en ligne l'autre avec un 5 cylindres en étoile

ENLARGE 141% !

The French Arachide

Maquette Volante taille "PEANUT"
Longueur 9" = 230 mm
Dessiné par E. Fillon Aéromodéliste

Acétate 2/10

Centrage

OO-ANT

Renard R33

Bambou

Documentation : les Ailes l'Aviation Illustrée Belge le MRA N°432 dans ce N° il y a une maquette de 860 mm d'envergure en encart

Couleur origine inconnue supposée Alu et bleu ou Alu et marron peut être réalisé en condensateur nature et bleue. Matricules noirs

Dièdre : 9 | Scale : 8

Styrofoam taillé en forme poncé et creusé

Moteur caoutchouc suivant poids du modèle une boucle de L : 400 mm de 1,5 à 3 gr Lubrifié

ϕ2 ϕ3 17 3

broche Ar tube Alu ou plastique

Roue balsa ϕ 18

Souplisseau ou gaine thermofit

Recouvrement général papier Japon fin blanc ou couleur tendu à l'enduit très dilué ou papier condensateur tendu à l'Alcool

Petits mâts bambou 0,8 x 1,2

Mâts balsa dur 1x2,5 profilés

Version à moteur en ligne Matricule OO.ANV

Ergot d'entraînement cap 3/10 Soudé

Palier Nylon

Axe cap 5/10

Rondelles laiton

Rondelle téflon ou Graphite

Cône balsa dur

Cylindres Williams

Nervures balsa 6/10

balsa 3 | balsa 1

train à l'échelle

Balsa 1,2 x 1,2

Bambou refendu 1x5 profilé 1x2 profilé

Scale

Nervures balsa 6/10

Hélice en balsa ou modèle commercial en plastique

4 Lisses paille ϕ 8/10 ou balsa dur 0,8 x 0,8

130 | 32 | 74 | 32 | 10 | 4

baguettes balsa 1x1

Balsa 1

balsa 1

balsa + Cp 5/10 Axe 1°2° à droite

5 cales de balsa 1x1

Styrofoam

Balsa 1 profilé ►

tous les collages colle cellulosique

Profilages papier bambou ϕ 5/10

balsa 1,2 x 1,2

balsa 1x2

Contours du stab à l'échelle bambou ϕ 8/10

Bord d'attaque balsa 1,2 x 1,2

Styrofoam

balsa 1x1

Longeron balsa 1x2

balsa 1x1

balsa 1 profilé ►

Position des mâts Contours des ailerons

OO-ANT

bord de fuite balsa 1x3 profilé ►

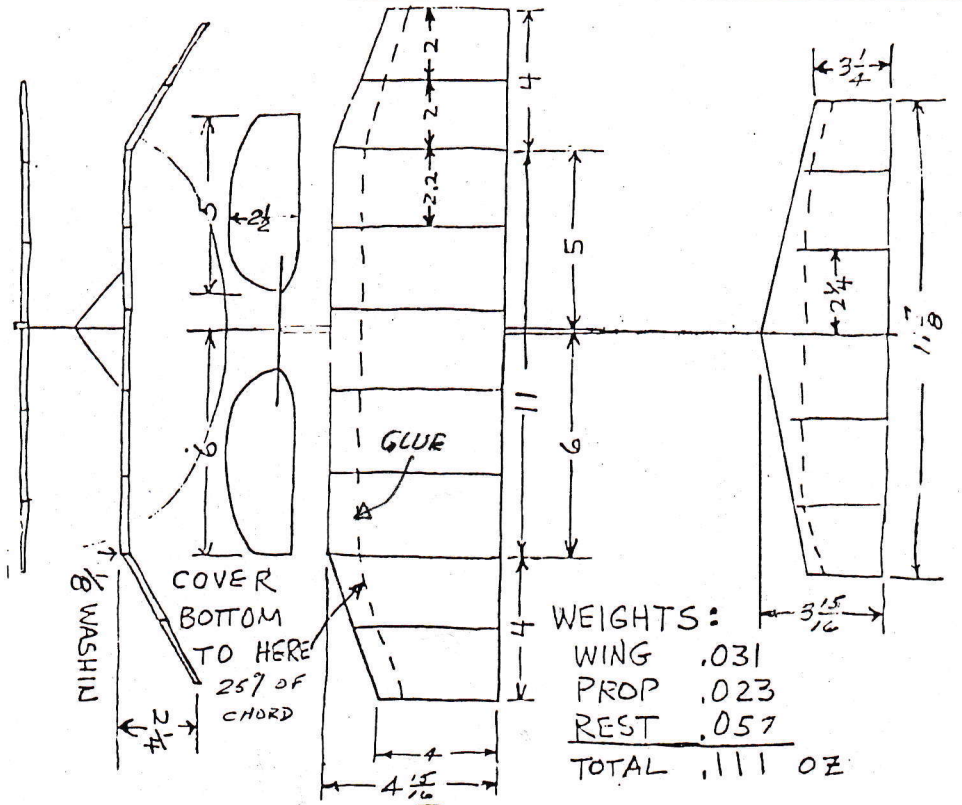
Echelle : 1/30

ET 88

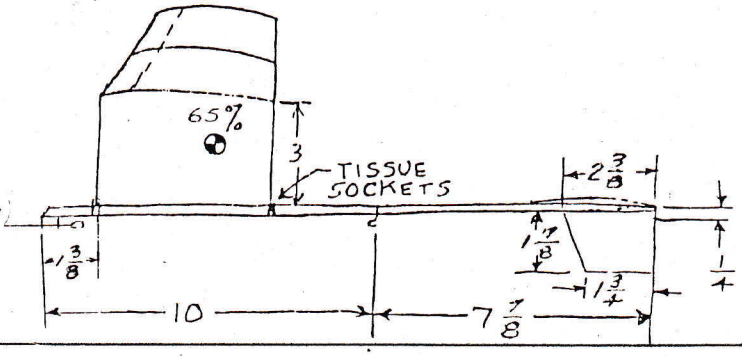
CAT I. NOVICE
PENNY PLANE RECORD
BEDFORD TEXAS
9 MIN 01 SECONDS

FIRST PLACE JOHNSON CITY
1987 - 12:44
THIRD PLACE JOHNSON CITY
1988 - 12:31
THIRD PLACE MOSCOW, IDAHO
1989 - 12:25





JIM CLEM
8-1-89



COVER: MYLAR — RAY HARLAN (ULTRA FILM
USE. THINNED RUBBER CEMENT

Dear Jörgen,

I enclose a drawing of the model I used in Johnson City, as you asked for drawings of the WC models. There are only minor changes compared to the previous versions. I have a new one flying, lighter and with a high aspect ratio tail. It looks to be better, it did 34'19 at Schiphol.

We have only flown three times at Schiphol this year and have suffered many postponements due to unavailability of the hangar. So the indoor activities are very low. There will most probably be no dutch representation at the WC in Rumania. Reasons: our models are not suitable for the saltmines and we hesitate because of the bad situation in the country.

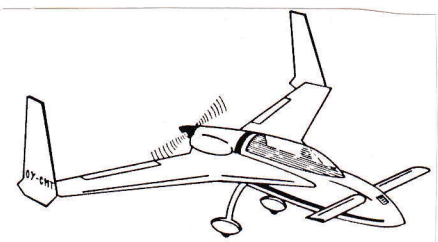
I did some comparative tests on TAN rubber obtained through FFn, probably from the new batch. I made up a couple of indoor size motors and tested the cruise energy. It is generally comparable to FAI but it is stronger and lasts longer. Cruise energy content is slightly lower, 90% compared to Pirelli 1981. Mean cruise torque is 88%. I have not tested the maximum energy. I will use it for Wakefield but not for indoor.

I have also checked my Pirelli which I store in paper bags. I use self made bags from white 120 g drawing paper. The motors I checked had been in the bag for 3½ years but showed no signs of deterioration.

At the moment I don't have more information of interest, but when I have I will send it to you. Hope you are able to continue publishing Indoor News.

Yours friendly, 5 NOV 89

Thedo André,
Venusstraat 49,
7557WP Hengelo (O),
Holland.



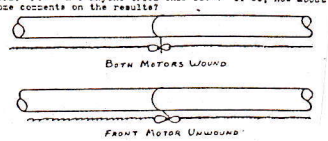
THE TORQUE BURNER

By Dick Obarski

The earliest concept of this device that I can recall was shown in the February, 1977 issue of Indoor News and Views at that time published by Bud Tenny. The included insert attributed to Louis Garami is shown and is entitled:

A LOOK AT YESTERYEAR

Back in 1936, there used to be a magazine called MODEL AIRCRAFT BUILDER. In one of these, Louis Garami suggested a gadget which was intended to help control model altitude in low ceilings. The device consisted of an S-hook and a wire pin. Two motors, shorter than the usual single motor, are hooked to the S-hook and to the prop and rear hook, so the S-hook is in between the motors. The pin mounts to the motor stick and prevents the S-hook from turning for a while. The sketch below shows (top) both motors wound and the pin engaged in the S-hook. The second sketch shows the rig as the front motor is mostly unwound; the S-hook has moved back almost enough to disengage the pin. The intent is for the model to climb on the power of the front motor, then drop down as the second motor rewinds the front motor enough for a second climb (but not as high). He also suggested that the pin location (and relative motor lengths) can be adjusted to tailor the climb pattern. Now - has anyone tried this idea? If so, how about some comments on the results?



I tricd it with disappointing results since the motor always got snagged in the wire pin and the rear portion of the motor did not unwind.

After a great deal of frustration and experimenting, the device finally evolved into the following:

Looking at the front of the model on the left side of the motor stick (with a right hand propeller) about one-third back from the prop shaft to the rear hook a offset wire hangar extends downward.

A small bushing, approximately one-third back from the front of the wound motor is then attached to the hangar yielding the same results Garami proposed, but for the most part, successfully released without getting snagged.

The accompanying sketches will clarify the written explanation.

To date, the best flight obtained has been 19 minutes 06 seconds in a 65 ft. ceiling with a few bumps on the lights and no touch ballooning at the December 31, 1988 and January 1, 1989 Miama contest at the Delta Maintenance Hangar in Tampa, Florida. The model climbed to about 55 feet, descended to 35 feet, climbed to 65 feet and slowly descended to the floor.

This type of device was approved for use by the contest directors at the 1987 USIC indoor championships held in Johnson City, Tennessee.

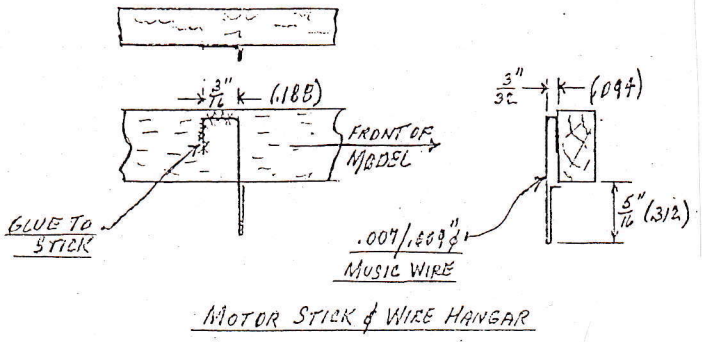
The spool can be made by any competent machinist and the fine wire (.007/.009 inch dia.) can be obtained at any music store that carries banjo or guitar strings. The thread used to tie the rubber motor to the spool can be obtained at any sewing center (.005/.006 inch dia.)

This device is easy to make as compared to a variable pitch or variable diameter propeller, neither of which are allowed under the current EZB rules and should afford a great deal of enjoyment and longer flights for most indoor enthusiasts who do not have an unlimited category IV ceiling to fly in.

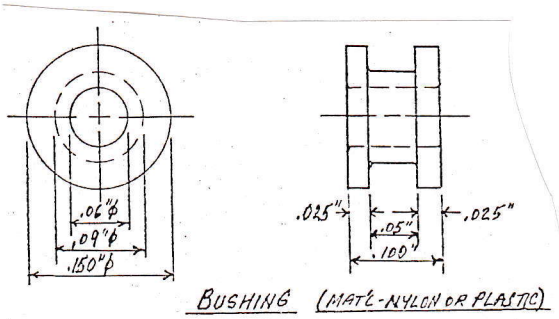
There are some side effects to be overcome such as the tendency for the motor stick to bend when the spool is attached to the offset hangar with a wound motor. The hangar must be offset in order to keep the motor from snagging on the hangar when it releases.

The whole idea, of course, which I am sure is already apparent to most of you indoor types, is to utilize the high energy near the breaking point of the rubber motor where the foot-pounds per turn are the greatest. By way of explanation, at present most good indoor mid-and low-ceiling flights are made by overwinding and then backing off on the turns to keep the model from going too high and getting snagged in the over-head beams and lights.

I hope that some of you indoor modellers will be interested in further development of this simple concept to a greater degree of reliability. At present, it works successfully about 80% of the time and the flight pattern is a joy to behold when all goes well.

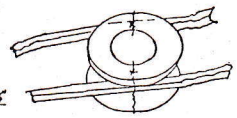


MOTOR STICK & WIRE HANGAR



BUSHING (MAT'L-NYLON OR PLASTIC)

THREAD TIES THRU BUSHING HOLE & AROUND FLANGE & OVER RUBBER. SECURE KNOT ENDS WITH PLIOBOND.



D'W'G-NOT TO SCALE

VIA DAVE YATES, UK

Wigan Tech. February and April.

The second and third meetings at Wigan Tech. were not quite as well supported as the January event, however, those who did attend seemed to enjoy themselves. During the 'Indoor Winter Season' the Electric Models have been trimmed, or should that be 'tamed'. In general they fly slower and look more realistic. Two models that come to mind are Derick Hardman's Avro and Reg Boor's Bristol Brownie, Squire Kay's ASDA specials are both entertaining and impressive, they show what can be achieved.

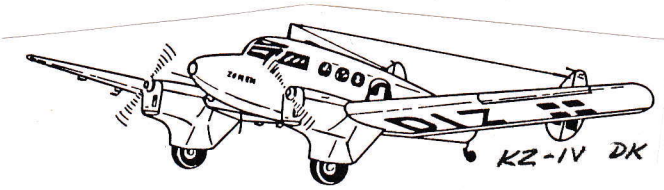
The February meeting saw further developments in the 'P-15' modified class, with 'Coffee Cup' and 'Perforated' propellers being used, see Tech. committee musings for 'Cardington Rules'. In a 'Close' contest John O'Donnell again came out on top, although Bill Murray had the longest flight of the day. Ron Sabey was the only entrant in the Std. Class.

At the April meeting 1.2 gm EZB was flown for the first time in many yrs. at a Low Ceiling site. Some good flights were made, that well known firm of solictiors Baker & Barker, flying in their first EZB contest put in some creditable times, scores were 'tight' for the 2nd. & 3rd. places, with Dave Yates well out in front , in spite of the steering problems with an 'Incredible Shrinking' Roach Pole, at a vital stage of his final flight.

Wigan Tech. results.

February 25th.			
P-15 Modified 5 flew.			
J.O'Donnell	4.02	4.11	8.13
Bill Murray	3.50	4.21	8.11
Dave Yates	3.47	3.37	7.24
Roy Roberts	3.15	3.25	6.40
John Barker	3.16	3.06	6.22
P-15 Standard 1 entry			
Ron Sabey	1.40	1.42	3.22

April 8th.			
1.2gm. EZB 6 flew.			
Dave Yates	10.40	10.58	21.38
J. O'Donnell	10.06	10.17	20.23
D.Wolstenholme	10.00	10.22	20.22
Chris Baker	8.46	6.51	15.37
Bill Murray	7.16	7.48	15.04
John Barker	7.30	7.15	14.45



Commercial Section.

John O'Donnell tells me he now has several weights (thicknesses) of Mylar (Plastic) Film for sale, plus 'Carbon Steel' Razor Blades and many other goodies, contact John on: 061 427 3711 for prices etc..

Due to upgrading collection two copies of Aeromodeller, October 1947 and October 1950 are going spare, they are complete with covers and in good condition, contact Dave Yates on: 0942 214725.

CLUB DE PETITE AVIATION

MJ LES TRIXHOSAURES

13eme Concours International pour Modèles Réduits d'Avions de Vols d'Intérieur

25 - 26 et 27 Aout 1989

PALMARES — FEMALLE

F 1 D - MICRO FILM — 8 COMP.

PL	NOM	PAYS	V O L S						TOTAUX
1	NIMPSCH Werner	D	1606	1568		1616			3222
2	KLINK A.	D	1394	1464	1456	1497			2961
3	KUJAWA Sylwester	PL	1270	1200	1362	685	1463		2825
4	CIAPALA Edward	PL	291	1145	499	1143	1266	1278	2544
5	CZECHOWSKI Ryszard	PL	770	1069	243	931	796	1071	2140

MICRO 35 — 5 COMP.

P	NOM	PAYS	V O L S						TOTAUX
1	NIMPSCH Werner	D	914	951					1865
2	KLINK A.	D	781	171	302	191	510	209	1291
3	DELCROIX Jacques	F	486	446	67	431	478	567	1053
4	D HONDT Emile	B	326	361	354	349			715
5	BERNARD Nery	B	356	151	225	232			588

CACAHUETES DUREE - SENIOR — 31 COMP.

	NOM	PAYS	TYPE APPAREIL	STAT.	V O L S					TOTAUX
	MERKT Thomas	D	SOLAR CHALLENGER	346,3		152	146	153	88	1248,3
	WEIL Jurgen	D	CLOUDBUSTER	475,2	105	93	92	78	105	1081,2
	DELCROIX Jacques	F	LACEY M 10	378,4	100	109	120	114	71	1064,4
	ALFERY Antonin	CZ	HEINKEL He 70G	497,2		84	82	77		983,2
	NEUMANN Heinz	D	SCALE RIDDER	458,0	74	81	75	93	80	966,0
	BOURDEAUD'HUI J.-P	F	POULLIN JP 30 - 2	392,1	88	83	90	100	96	964,1
	FRAIKIN Henri	B	POTTIER 100 TS	381,9	89	92	91	64	103	953,9
	KUJAWA Sylwester	PL	SOLAR CHALLENGER	339,6	87	87	95	100	103	905,6
	KUJAWA Sylwester	PL	SKY RIDER	399,7	86	69	60	89	92	933,7
	BOURDEAUD'HUI J.-P	F	POULLIN JP 30 - 1	381,5	81	90	92	92		929,5
	NEUMANN Heinz	D	MOTTE	494,8	74	69	63	61	69	918,8

CACAHUETES - MAQUETTES — 8 COMP.

PL	NOM	PAYS	TYPE APPAREIL	STAT.	3 Vols de 15 Sec.				TOTAUX
1	ALFERY Antonin	CZ	CHANCE VOUGHT V-1	575,0	26	25	28		575,0
2	ALFERY Antonin	CZ	SPITFIRE LF Mk.IX	494,8	29	48	37		494,8
3	ALFERY Antonin	CZ	MESSERSCHMITT Bf.	494,8	19	40	32		494,8
4	KUJAWA Sylwester	PL	CLERGET 1909	463,6		34	37	23	463,6
5	MERKT Thomas	D	BLERIOT XI	459,4	16	13	17	18	459,4

E.Z.B.

PL	NOM	PAYS	11 COMP	V O L S					TOTAUX
1	CZECHOWSKI Ryszard	PL	696	758	144	131	654		1454
2	WEIL Jurgen	D	710	686	649				1396
3	DIHM Jan.	PL	430	201	514	600	665	652	1317
4	GRUNEWALD Richard	D	586	633	661	602	467	154	1294
5	BECK Dieter	D	533	531	468	580	627	441	1207

F 1 D "BEGINNER" — 5 COMP.

PL	NOM	PAYS	V O L S						TOTAUX
1	MERKT Thomas	D	509	500	587	617	652		1269
2	NIMPSCH Werner	D	89	568	617	619			1236
3	WEIL Jurgen	D	540	559	121	597			1156
4	DELCROIX Jacques	F	473	189	487	523	258	496	1019
5	BERNARD Nery	B	270	315	310				625

SAINTE FORMULE (+de2gr) SENIOR — 8 COMP.

PL	NOM	PAYS	V O L S						TOTAUX
1	FRAIKIN Henri	B	248	257	240	247	256		761
2	DELCROIX Jacques	F	206	178	194	201	205		612
3	NEUMANN Heinz	D	191	200	157	185	179		576
4	GREEN Michael	GB	104	93	108	149	122		379
5	D HONDT Emile	B	116	113	98	129	133		378

PISTACHIO — 18 COMP.

PL	NOM	PAYS	TYPE APPAREIL	STAT.	V O L S					TOTAUX
1	LOTZ Rainer	D	WINDHAM TANDEM	334,4	143	149	148	76	153	1238
	LOTZ Rainer	D	CLOUDBUSTER	308,2	100	69	106	90	112	944
3	ALFERY Antonin	CZ	FIKE MODEL E	456,5	65	63	65	80	66	879
	WEIL Jurgen	D	CLOUDBUSTER	482,7	50	62	67	63	55	866
5	DELCROIX Jacques	F	LACEY M 10	371,9	35	70	75	73	69	807
6	ALFERY Antonin	CZ	SPITFIRE Mk.XIVe	480,5	47	39	45			742
7	GLOCKNER Siegfrie	D	BRISTOL BROWNIE	348,7	38	38	39	45	43	602
8	ALFERY Antonin	CZ	PREZEWIECKI "CANA	444,6	55	23				600
9	GLOCKNER Siegfrie	D	FOED	395,1	34	23	27	25	34	585
10	BOURDEAUD'HUI J.-P	F	STAMPE	461,1	18	19	15	8		565

FIRST INDOOR FLIGHTS AT THE (SUPER) "GLOBE" IN STOCKHOLM, SWEDEN.....

Dear Jorgen!

We have now made our very first test flights in the Stockholm Globe Arena to great satisfaction. The building is really excellent even for F1D flying, but I'm not quite sure of the actual ceiling height to the technical bridge. It feels very low considering the total height of 85 m (278 feet), but it is said to be 35 m (115 feet) high.

Leif Englund, Finland, managed a safe +30 minutes flight with minimum drift. He considers this hall one of the best he has ever flown in. Remember that Leif has been competing internationally since 1954!

We were promised a two day access, but depending on construction work we got a short 6 hour meeting for 23 indoor flyers in different classes. The acceptance from the Globe personell was filled with admiration and understanding, but one big problem remains: financing an actual indoor contest. The cost per day is the considerable amount of SKR 250.000, some USD 38.285!

But when the arena is not booked for another event, it is empty and we are welcome to come and fly our models. That means usually at weekdays and on short notice. A paying customer naturally comes first, as the Globe Arena is a private enterprise with a responsibilty to its shareholders. With more than 200 booked events per year and lots of construction work in between, it is really very difficult to make any kind of contest planning in advance. If we call our meetings contests, it might mean recieving a shocking invoice. The managing director now understands that we will not fill 16.000 seats with paying spectators, and he is anxious to show us some goodwill.

So in short, the flying for all kinds of indoor models works better than anticipated, but holding a big international contest in the globe seems more than doubtful. But we will continue our negotioations with the management, so perhaps some kind of settlement might be reached. I'll let you know.

Very truly yours

Sven Pontan

Sven Pontan

SCOOP...

The 1986 F1D Plan Book/Cardington Programme with 40 F1D plans was very quickly sold out. Here in November 1989 SAMS MODELS in UK just revealed that he has 16 copies left! Send him 5£ and he will send you one.

The address: SAMS
The Chapel
Roe Green
Sandon
Buntingford
Herts SG9 OQJ
England

Phone: o76 388 384

I'm sure that they will be sold out soon but the 16 first will succeed in having one.

World Record.

The FAI has now recognised Werner Nimptsch's CAT I F1D duration record set on 1st May 1989. The record is 29 min 55 sec. Congratulations, Werner.

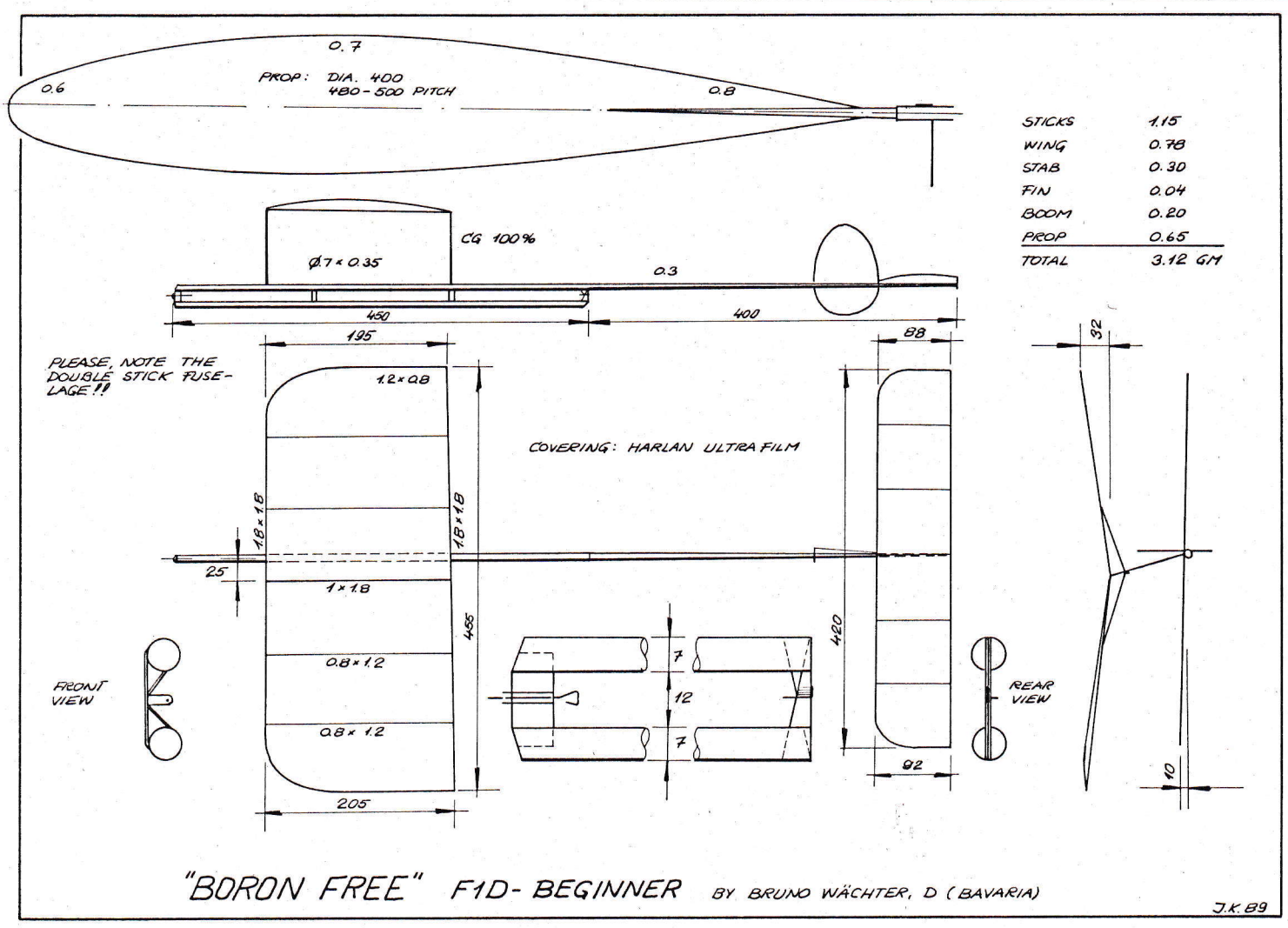
How this record was flown was reported in the last issue.

Jim Clem

is a new subscriber to IN and he has supplied a dwg of his successful Novice Penny Plane.

He had seen all the previous IN issues at Dick Ganslen and says: "This is the GREATEST collection of indoor data I have ever seen." .....

(Thank you for the nice words, Jim. ED)



"BORON FREE" F1D- BEGINNER BY BRUNO WÄCHTER, D (BAVARIA)

J.K. 89

GERMAN NAT 1989

Klasse F1D

Deutscher Meister						
Nimisch, Werner	NI	13'05"	15'30"	17'32"		
		-	5'20"	17'00"	34'38"	
2. Kuttler, Peter	BY	15'28"	13'20"	8'58"		
		17'10"	16'41"	11'04"	33'51"	
3. Nottelmann, Klaus	NW	-	13'38"	15'25"		
		17'10"	16'02"	15'43"	33'12"	
4. Miehe, Bernd	NI	10'47"	10'26"	16'02"		
		16'28"	7'29"	14'21"	32'30"	
5. Klinck, Alfred	SA	12'18"	13'50"	15'17"		
		16'10"	13'29"	15'55"	32'05"	
6. Trzaska, Manfred	NI	0'03"	8'22"	12'22"		
		11'43"	5'09"	-	24'05"	
7. Merkt, Thomas	BW	8'20"	-	11'08"		
		10'04"	11'58"	11'23"	23'21"	
8. Gamske, Johannes	NI	4'11"	10'16"	12'07"		
		4'12"	-	-	22'25"	
9. Lotz, Rainer	BW	-				

Zusammenfassung 1. und 2. E-Kader Leistungswettbewerb 1989

1. Nimptsch,W.	NI	1.	55'36"	100	%	1.	34'38"	100	%	1 1 200 %
2. Nottelmann,K.	NW	3.	50'28"	90,76		3.	33'12"	95,86		3 3 186,62
3. Miehe,B.	NI	4.	46'56"	84,41		4.	32'30"	93,84		4 4 178,25
4. Klinck,A.	SA	7.	43'13"	77,72		5.	32'05"	92,63		7 5 170,35
5. Lotz,R.	BW	2.	54'49"	98,59		-				2 - 98,59
6. Kuttler,P.	BY	-				2.	33'51"	97,73		- 2 97,73
7. Becker,J.	RP	5.	44'58"	80,87		-				5 - 80,87
8. Ondraczek,G.	BW	6.	44'37"	80,24		-				6 - 80,24
9. Trzaska,M.	NI	-				6.	24'05"	69,53		6 - 69,53
10. Merkt,T.	BW	-				7.	23'21"	67,42		7 - 67,42
11. Gamske,J.	NI	-				8.	22'25"	64,72		8 - 64,72

6./7.05.1989 Dillingen SA ganzer Strang DK bis 8 m
15./16.07.1989 Dortmund NW halber Strang DK bis 15-30 m

Klasse F1D-F1

Deutscher Meister					
Werner , Nimptsch	NI	9'00"	10'19"	9'55"	
		11'05"	-	-	21'24"
2. Lotz, Rainer	BW	8'40"	7'40"	9'00"	
		9'55"	7'45"	9'55"	19'50"
3. Klinck, Alfred	SA	8'19"	3'10"	3'55"	
		8'40"	9'00"	3'22"	19'20
4. Miehe, Bernd	NI	5'32"	9'07"	10'07"	
		7'48"	7'11"	7'55"	19'14"
5. Möhle, Gerhard	NI	5'00"	7'15"	7'55"	
		7'46"	9'15"	7'12"	17'10"
6. Kuttler, Peter	BY	8'33"	7'06"	8'05"	
		-	3'53"	-	16'38"
7. Gamske, Johannes	NI	6'36"	7'34"	5'00"	
		6'20"	7'15"	-	14'49"

Klasse F1D-J1

1. Nimptsch, Werner	NI	9'58"	10'33"	12'20"		
		12'02"	10'45"	-	24'22"	
2. Lotz, Rainer	BW	11'00"	9'21"	10'57"		
		12'00"	12'07"	10'27"	24'07"	
3. Trzaska, Manfred	NI	9'31"	11'40"	10'36"		
		5'42"	8'03"	-	22'16"	
4. Miehe, Bernd	NI	9'20"	9'33"	-		
		9'41"	7'50"	8'40"	19'14"	

Klasse F1D-E(Beginner)
Deutscher Meister -Deutscher Jugendmeister

Berger, Fabian	BW	9'04"	9'22"	12'32"		
		12'33"	11'17"	10'52	25'05"	1.Schüler
2. Berger, Wolfgang	BW	6'50"	12'01"	3'14"		
		12'10"	11'14"	12'45"	24'55"	
3. Schlosser, Benno	BW	9'48"	8'57"	11'32"		
		5'08"	3'51"	11'43"	23'15"	
4. Merkt, Thomas	BW	9'31"	1'10"	3'53"		
		-	12'07"	-	21'38	1.Jugend
5. McKeverne, Jan	BW	10'43"	3'35"	3'00"		
		4'03"	10'20"	10'20"	21'07"	
6. Trzaska, Michael	NI	8'00"	8'12"	3'33"		
		10'37"	10'38"	10'24"	21'02"	2.Schüler
7. Trzaska, Manfred	NI	10'19"	8'30"	10'18"		
		9'13"	7'32"	7'22"	20'37"	
8. Gaenslen, Rüdiger	BW	9'56"	10'09"	9'48"		
		-	9'34"	10'07"	20'16"	
9. Luxemburger, Jürgen	SA	8'49"	8'22"	9'17"		
		7'56"	10'06"	2'57"	20'03"	
10. Lotz, Rainer	BW	7'31"	-	-		
		9'11"	7'32"	10'19"	19'30"	

Klasse F1D-TH

Deutscher Meister						
Lotz, Rainer	BW	11'12"	11'57"	3'08"		
		-	-	-	23'09"	
2. Berger, Wolfgang	BW	10'36"	9'52"	10'19"		
		-	7'47"	-	20'55"	
3. McKeverne, Jan	BW	8'43"	8'23"	4'20"		
		3'44"	8'38"	11'48"	20'31"	
Deutscher Jugendmeister						
4. Merkt, Thomas	BW	-	6'10"	2'55"		
		4'11"	10'01"	9'51"	19'52"	1.Jugend
5. Trzaska, Michael	NI	8'06"	9'15"	9'05"		
		7'21"	9'29"	9'43"	19'12"	1.Schüler
6. Berger, Fabian	BW	5'05"	8'20"	3'23"		
		-	8'30"	10'16"	18'46"	2.Schüler
7. McKeverne, Michael	BW	7'27"	5'41"	7'35"		
		7'41"	2'15"	10'43"	18'24"	2.Jugend

Klasse F1L-F2

1. Lotz, Rainer	BW	11'31"	11'54"	13'38"		
		-	-	-	25'32"	
2. Gamske, Johannes	NI	8'06"	11'31"	12'18"		
		12'40"	11'30"	11'50"	24'58"	
3. Kuttler, Peter	BY	9'32"	6'17"	6'27"		
		9'32"	10'45"	10'39"	21'24"	
4. Möhle, Gerhard	NI	9'22"	9'18"	9'05"		
		8'05"	3'10"	9'09"	18'40"	

Where do they come from?

Indoor News has subscribers from the following countries:

USA 37
Canada 1
Argentina 1
Australia 6
China 1
Japan 3
West Germany 26
England 15
Austria 1
Switzerland 5
Holland 6
Belgium 3
France 8
Italy 2
Poland 4
Czechoslovakia 2
Hungary 1
Romania 1
Yugoslavia 6
Finland 4
Norway 1
Sweden 6
Denmark 12

These figures should give 152 subscribers from 23 countries.

INDOOR NEWS .....

is a nearly non-profit private enterprise. I say "nearly non-profit" because it gives a financial surplus in the range of 50-80 dollars per year which I use for new drawing pens, dwg paper, colour bands for my typewriter etc.etc. It is also used to pay the exchange of newsletters and occasionally I give away a few issues to newcomers and as for prizes at contests.

Cardington 1990 ..... NO!

According to IN 3/88 it seemed likely that the English would apply for running the 1990 W/Ch at Cardington. But the situation has changed because - seemingly - there have been problems about optaining a fixed aggreement with the air-sheds users.
So now we are very anxious to see what kind of offers the FAI has got to this event!

HUNGARIAN CHAMPIONSHIPS Aug. 25-27. 1989
Debrecen (29.3 m site)

1	Reé, András	37:39	37:38	=	75:17
2	Beke, Géza	32:42	33:18	=	66:00
3	Bakos, Ferenc	33:37	31:44	=	65:21
4	Orsovai, Dezsö	30:42	32:23	=	63:05
5	Botos, István	30:42	30:05	=	60:47
6	Káplár, János	25:00	28:45	=	53:45

. . .

RUNWAY
HAS RELOCATED!
HANNAN'S RUNWAY, Box 860, Magalia, CA 95954

CARDINGTON 1990

(f) PROVISIONAL DATES FOR THE 1990 SEASON

8 APRIL	CARDINGTON LEAGUE AND INDEX
29 APRIL	.. ..
20 MAY	.. ..
3 JUNE	.. ..
23/24 JUNE	SHEPTON MALLETT:(POSSIBLE CAT.1 RECORD ATTPTS.)
8 JULY	CARDINGTON LEAGUE AND INDEX
22 JULY	.. ..
5 AUGUST	.. ..
18/19 AUG.	INDOOR NATS. (NB: No doubling up of INDEX comp flights are allowed for these comps
2 SEPT	CARDINGTON LEAGUE AND INDEX + ONE MODEL COMP.for " KENNY-PENNY "
15/16 SEPT	CARDINGTON TRIALS FOR EUROPEAN CHAMPIONSHIP TEAM



▲ Bodovači hodnotí „oříšek" He-70 ing. A. Alferyho, který získal cenu redakce Letectví a kosmonautika

Schweizermeisterschaft F1D 1989

Lichthof Universität Zürich (24m), 30.9./1.10.1989

		1/2 Motor					1/1 Motor			Total	Rang
D. Siebenmann	DU	20.45	20.20				33.16	36.58		78.03	1
R. Butty	DU	14.09	20.16	2.10	20.41		30.58	35.25	35.39	76.36	2
R. Ruppert	HI	18.10	19.27	18.27	18.27	19.20	26.11	28.58	32.00	70.47	3
P. Keller	FL	19.38	16.22	19.15			31.23	29.33	23.48	70.16	4
Th. Pham	FL	4.20	10.27	16.06			-			26.33	6
T.Merkt	D	14.15	12.02	4.46	7.19		28.59	31.43		58.00	5

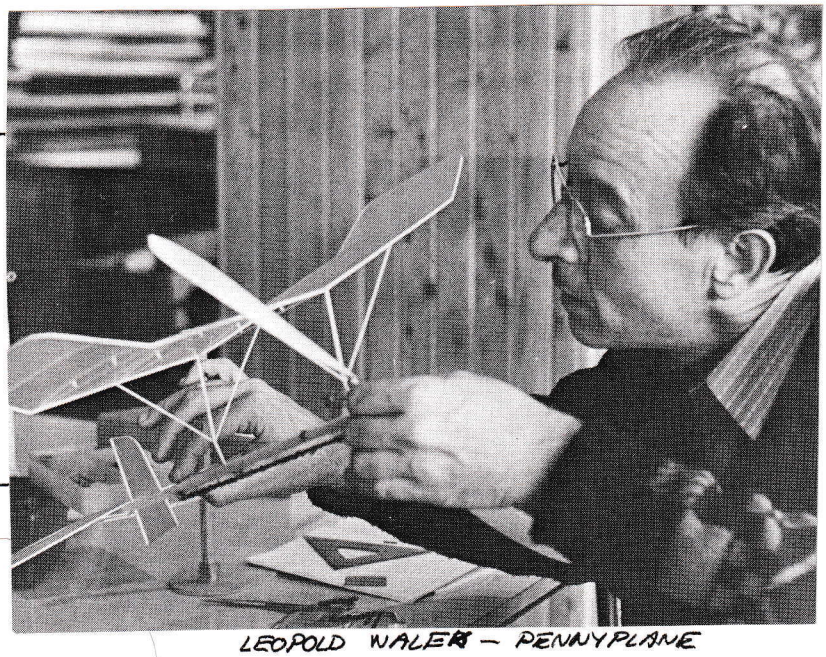
Neuer Hallenrekord : D. Siebenmann 36.58

Wettbewerb F1D - Beginner

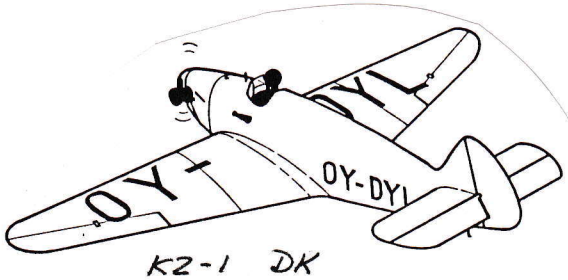
B. Schlosser	D	12.21	13.29	13.41	FAI,Tan"			27.10	2
U.Bundesen	D	10.19	13.30	14.18	14.45	15.08	FAI,Tan"	29.53	1
W. Berger	D	9.55	10.47	7.20	12.05	12.05	FAI,Tan"	24.10	4
F.Berger (jun)	D	9.18	3.31	9.20	8.24	11.26	FAI,Tan"	20.46	7
T.Merkt	D	9.57	11.05	11.27				22.32	6
I.Mc.Keverne (jun)	D	9.33	10.28	12.26	FAI,Tan"			22.54	5
P.Keller	FL	12.20	11.36	12.27	12.59			25.26	3

Neuer Hallenrekord : Uwe Bundesen 15.08

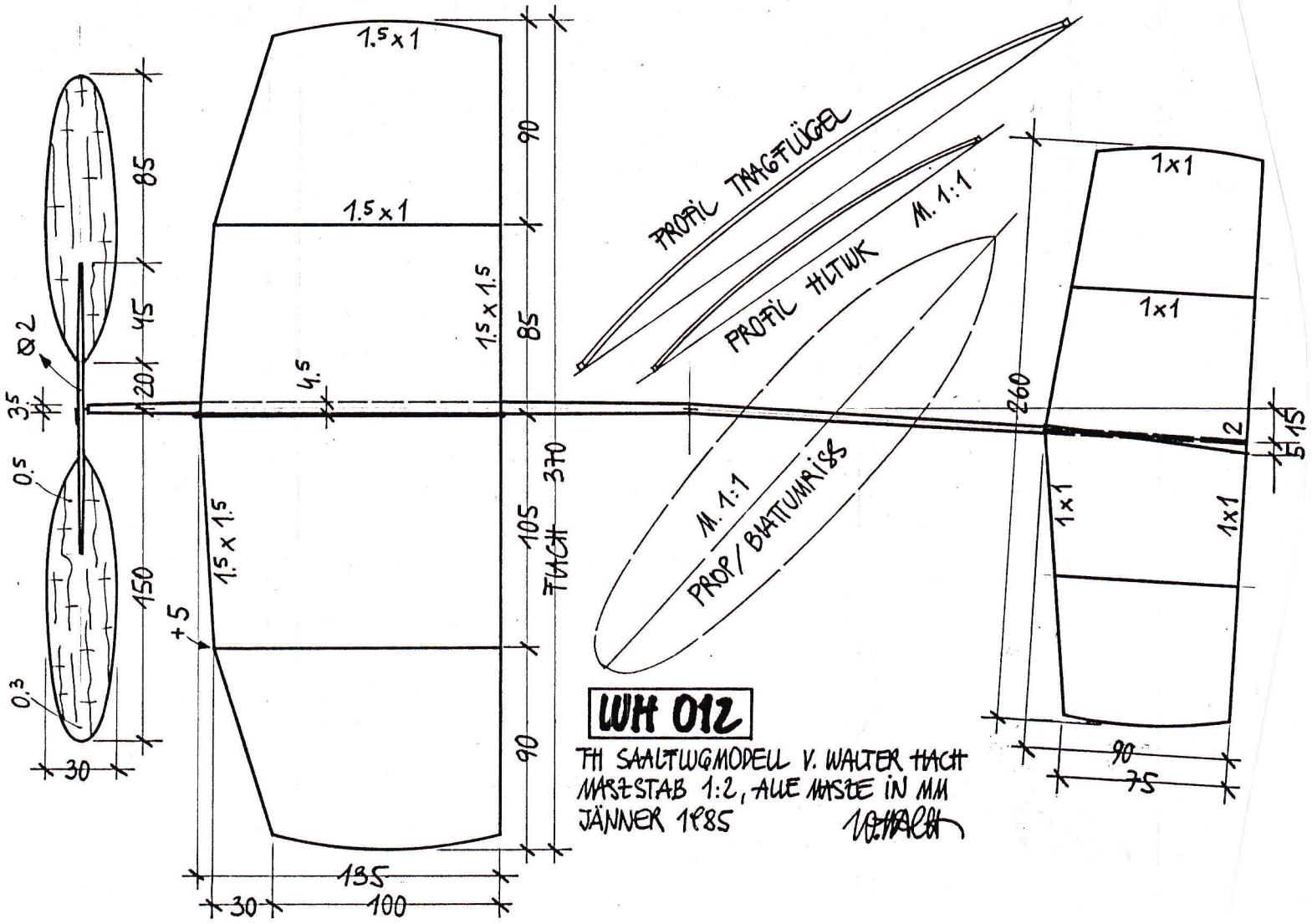
Für die IG Saalflug:
Peter Keller



LEOPOLD WALEK – PENNYPLANE

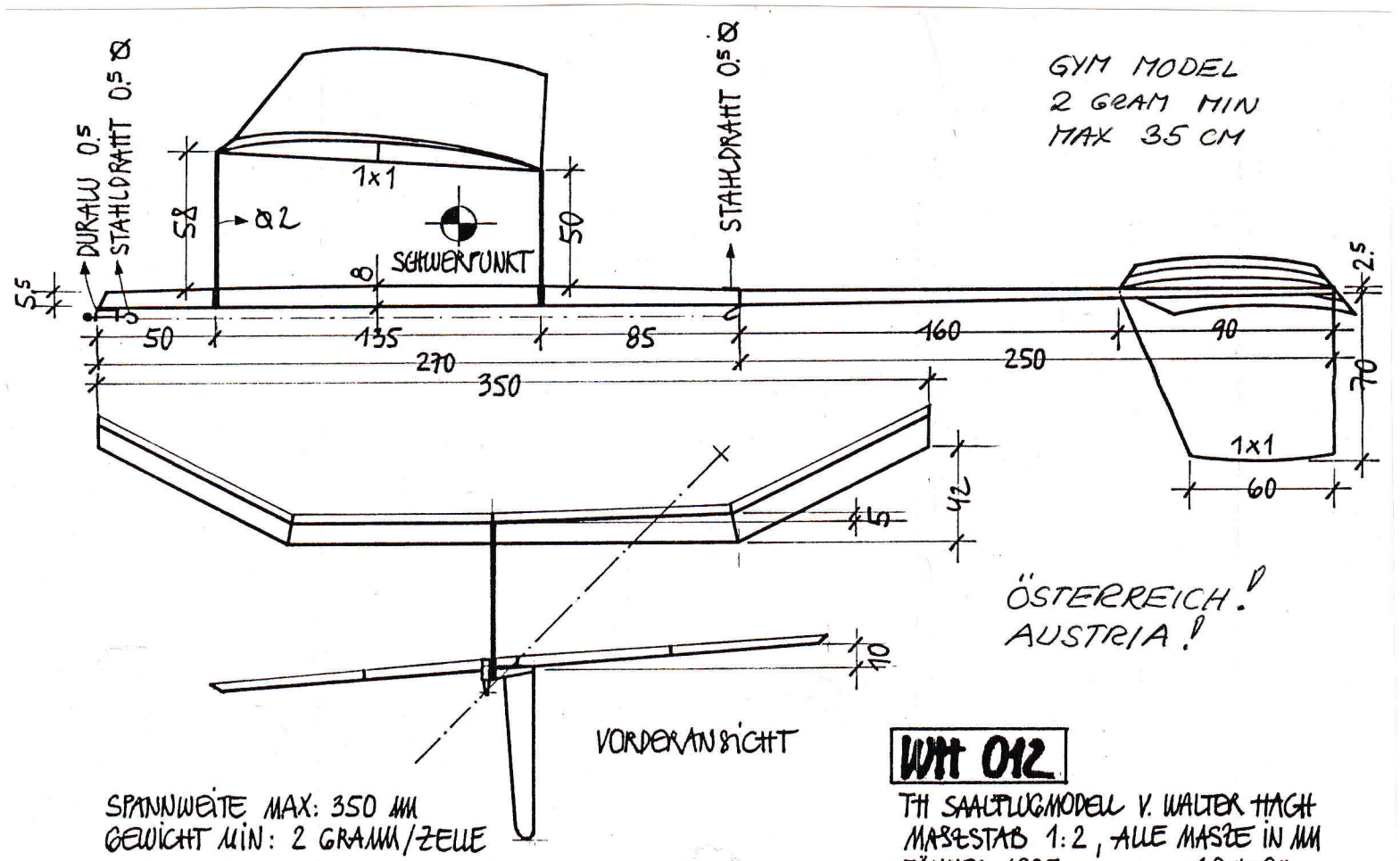


KZ-1 DK



WH 012

TH SAALFLUGMODELL V. WALTER HAGH
MASSTAB 1:2, ALLE MASSE IN MM
JÄNNER 1985



GYM MODEL
2 GRAM MIN
MAX 35 CM

ÖSTERREICH!
AUSTRIA!

VORDERANSICHT

SPANNWEITE MAX: 350 MM
GEWICHT MIN: 2 GRAMM/ZELLE

WH 012

TH SAALFLUGMODELL V. WALTER HAGH
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