

Indoor News





Issue 45 February 1998

DIARY

22-24 May Donetck Ukraine	**Donbass Cup, F1D.** Entry $20. Contact: V. Moskalev, Krasnoflotskaya 74, 340053 Donetck, Ukraine, tel +380 622 942010, fax +380 622 946159
20-21 June Orleans France	**Concours International dÓrleans. F1D, F1L, F1D-B.** Entry FF 100. Contact: J. Delcroix, 41 Allee du Caudray, 45160 Olivet, France, tel +33 238 634957
27-30 Aug Angleur Belgium	**Indoor International. All classes.** Contact: B. Delhalle, 62 rue de Souvret, B-4000 Liege, Belgium, tel +32 4275 0523
11-17 Oct Slanic Romania	**F1D Indoor World Championships 1998.** Contact: Federatia Romana de Modelism, Str Vasile Conta no. 2, sector 2, 70139 Bucharest, Romania, tel +40 1211 0160, fax +40 1210 0161.

POSTAL/PROXY EVENTS

til March 31, '98	**14th MIAMA Postal Pistachio Inter-Gnats.** Rules: 1. Send in photo (you and your olane), 2. Best time, indoors, 3. Weight, less rubber, 4. Three divisions: I Scale, II Model of a model, III Ridotto: smallest span to fly 30 seconds.... Send in span in mmillimetres. Results to: MIAMA, 2180 Tigertail Ave., Miami, FL 33133, USA
til March 31, '98	**1998 International Mini-Stick Postal.** See info elsewhere in this issue.
til March 31, '98	**1998 EZB Postal Contest. Division A: USA rules EZB, division B: F1L rules EZB.** See info elsewhere in this issue.
til March 31 '98	**NOCAL FF ML Postal Contest.** See info elsewhere in this issue.
til March 31 '98	**International A-6 Contest.** See info elsewhere in this issue.
Winter 98/99	**AeroNutz Indoor Schneider Cup,** see info elsewhere in this issue.

CIAM Plenary Meeting Agenda

The following is an extract from indoor-related proposals which are on the agenda of the CIAM Plenary Meeting to be held on March 26 and 27.

Validity of World Championships

England proposes to increase the minimum number of participating countries for a valid World Championship to 7 (or 4 for a European Championship). If the entry is less than seven teams from different nations, the world championships must be cancelled. Should cancellation occur, future eligibility for World Championship status must be achieved again as specified in A.15.1, which states:

A.15.1. Before they can be considered by the CIAM for use in world championships, there must be a minimum period of two years from the time the rules were made official during which at least two international contests were held, each with a minimum of seven teams from FAI member nations participating

Reason: To achieve a more realistic eligibility requirement for the status of International Championships that will allow poorly supported classes to more readily dropped from the ever increasing number of Aeromodelling Championships.

F1D-Beginner

The Free Flight Subcommittee and France propose

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. Please type your texts on 12,5 cm width. Texts can be sent on floppy disk (3½ or 5¼) in any text format. I can make drawings, if you are no draftsman.

Payment of subscriptions is preferred per eight issues. When paying by Eurocheque, **International** Postal Money Order or with bank notes no additional bank fees are required. Please add NLG 6,50 for bank fees when paying by Eurogiro or NLG 20,00 with foreign checks. The Eurogiro account number is 4406860.

Editor:
Thedo André
Meijhorst 35-43
NL-6537JD Nijmegen
The Netherlands
Phone/Fax +31 24 3450711
E-mail: Thedo.Andre@net.HCC.nl

Subscription:
(per 8 issues)
Holland NLG 28,-
Europe NLG 30,-
Airmail USD 20.00

to rename the F1D-B class into F1M. Reason:
The Sporting Code definitions currently omit the provisional class F1D Beginner which is included in the Provisional rules (Section 4e). This should be rectified and to make the class definition it should be renamed F1M. The class is a valid and useful indoor model without the confusion implied by its present name.

Indoor Hand Launched Glider

The Free Flight Subcommittee proposes to add a new class F1N Indoor Hand Launched Glider. Reason: The class recognises a challenging and different form of indoor free flight and establishes FAI rules for an event which is flown in many countries

CLASS F1N INDOOR HAND LAUNCHED GLIDER

3.N.l. **Definition**
Aeromodel which is flown in an enclosed space and which is not provided with a propulsion device and in which lift is generated by aerodynamic forces acting on surfaces remaining fixed (i.e. not rotating or ornithopter type surfaces).

3.N.2. **Characteristics**
Models with variable area (e.g. folding wings) are not permitted.

Construction: The major components (wing, tailplane, fuselage) must be of solid materials throughout. No built-up structure is permitted.

The number of models eligible for entry by each competitor is three.

3.N.3. **Number of Flights**
The competitor shall be allowed 9 flights.

3.N.4. **Definition of an Official Flight**
a) The duration achieved on the first attempt unless this attempt is unsuccessful under the definition of 3.N.5.
b) The duration achieved on the second attempt. If the second attempt is also unsuccessful under the definition of 3.N.5., then a zero time is recorded for the flight.

3 N 5. **Definition of an Unsuccessful Attempt**
An attempt is classed as unsuccessful if the model is launched and at least one of the following events occur. If this happens on the first attempt then the competitor is entitled to a second attempt.
a) the model collides with a person or an object held by a person (the competitor excluded)
b) the model collides with another model in flight

3.N.6. **Timing of Flights**
The flights must be timed by two timekeepers with electronic stopwatches with digital readouts. The time recorded is the mean of the times registered by the timekeepers, but reduced to the nearest one tenth of a second below the resulting mean time, unless the difference between the times registered shows evidence of an error in the timing, in which case the organiser should determine, with the FAI Jury, which time should be registered as the official time or what other action should be taken.

From Section 4b. para. B.9., only B.9.1 and B.9.2 apply to class FIN.

The timing of each flight shall commence when the model is launched. Timing will terminate when:
a) the model comes to rest on the floor of the building.
b) the model comes into contact with any, part of the building or its contents other than the floor and translational movement ceases.

3.N.7 **Classification**
The total of the three best flights of each competitor shall be taken for the final classification. In the case of a tie the fourth best flight decides and so on in the case of a further tie.

3.N.8 **Launching of Models**
Launching is by hand, the competitor standing on the ground. A leap or jump at the moment of launch is permitted.

3.N.9 **Ceiling Height Categories**
The following ceiling height categories are recognised for contests and records:
I. - less than 8 metres.
II. - between 8 and 15 metres.
III. - between 15 and 3 0 metres.
IV. - higher than 30 metres.
The height of the ceiling is defined as the vertical distance from the floor to the highest point at which a circle of 15 metres can be inscribed, below the primary structure of the building.

F4F - Peanut Scale

Belgium proposes to delete different points for double or single covered surfaces. Par. 6.6.5. d) will then read:
d) Surface texture and realism 1-10
Note: if the prototype was itself single-covered, the model should likewise be single-covered.
Reasons:

- a simplification of judge's work.
- with new materials available (e.g. foam), it is not rare to have to judge a model made of a combination of balsa/foam/ condenser or Japanese paper. These kind of material combinations are not covered by the current scoring method.
- F4F peanut are scale models. It is logical to judge the realism of the model compared to the prototype. It is nonsense to give points concerning the material used to reproduce the surface texture of the prototype.

New Categories of World Records

The CIAM Records Working Group proposes to add new categories of World Records:
There are two categories of World Records, viz:
1) Records performed with special record models under the specifications given in paragraph 7.2.;

2) Records performed in regular competitions with models and competitions defined in Sporting Code Section 4c, Parts 1, 2, 3, 4 and 5.

For indoor the following applies:
b) In competition, records are recognised for duration in class F1D for:

i) the longest duration single flight;
ii) the longest total of the two best flights (as used for F1D classification);
iii) the longest total duration on all six competition flights.

Reason: The controlled conditions of indoor flying gives an easy international measure of performance and is very suitable for records to recognise excellence of flying.

A revised Table of Record classes was added to the Agenda, which also lists the F1L class.

General

France proposes amend par. 3.4.11.b) to read:

b) Winding of rubber motors may be done by either the competitor or his helper must be done by the competitor himself.

Reason: To conform with the general principle of rubber classes. Winding of the rubber motors is an essential part of the preparation of the model and decides the duration of the flight and so it must be done by the competitor himself.

1998 F1D Indoor World Championships

Venue: Slanic -Prahova, Romania
Date: 11th to 17th October
Entry Fee:
Team Manager, competitor US$225.00
Helper/Supporter US$45.00
Accommodation/meals:Hotel & Restaurant Slanic US$40.00/person/day (hot lunch in salt mine, breakfast and dinner in restaurant)
Banquet: US$25.00/person
Jury: S Pimenoff (Finland)
I Kaynes (United Kingdom)
M Zanciu (Romania)
P Chaussebourg (France) (reserve)
(The organisers offered Senior and Junior World championships but the latter offer was not accepted)

INDOOR NEWS

This issue of Indoor News is a little late because of lack of material for publication. Over the past few years I have increasing difficulty in getting sufficient material. I have asked a number of readers in different countries to help me on this and some of them have agreed to act as "foreign correspondents" to Indoor News. I hope this will work. It's primarily the readers who make Indoor News to what it is. If you feel you can contribute in one way or another, don't hesitate to do so. You can write in your native language through your countries correspondent. Ask me whether there is one in your country.

I can now be reached also through E-mail at the following address: Thedo.Andre@net.HCC.nl.

Aeromodelling on the Internet

The following may be accessed on the FAI page at http://www.fai.org/~fai/aeromodelling/

- Section 4 of the FAI Sporting Code,
- Free Flight World and European Championships results since 1989;
- Control line World Championships results;
- Dates of CIAM Bureau meetings with Agendas (1997) and Minutes (1996);
- CIAM Flyer;Technical Subcommittee Chairmen

Contests in Cardington (GBR)

The program of indoor meetings to be held at Cardington is as follows:

April 19	Limited Penny Plane
May 3	EZB
May 17	F1D Beginner
June 14	Living Room Stick
June 28	EZB
July 12	F1D Beginner
July 26	Limited Penny Plane
Aug 9	EZB
Aug 29	Nats - F1D Beginner and Nocal
Aug 30	Nats - EZB and Limited Penny Plane
Aug 31	Nats - F1D and LRS (1st Team Trials)
Sept 13	F1D (2nd Team Trials)
Sept 27	F1D Beginner (reserve day for Team Trials)

There will be BMFA certificates for all events and trophies for Nats events. EZB events will be run to 1.2g F1L rules. All EZB and Limited Penny Plane events (except Nats) will be handicapped with a simple time penalty based on the flyer's previous best time (like golf!). Nocal (no min. weight) and F1D-Beginner (sometimes called F1D(B)) are introduced as full Nats events. An individual National Championship trophy

will be awarded based on the results of the Nationals events.

For those that are new to Cardington, it is situated on the A600 about 3 miles south of Bedford (drive in through the gate next to the field, go between the hangars and turn left to reach the vehicle entrance to No.1 Hangar). We close the big door at 11am so if you want to park in the Hangar get there before then otherwise park outside and use the north pedestrian door.

No.1 Hangar is huge (1000 feet long, 300 feet wide and 150 feet high (300 x 90 x 50 m)) so there is plenty of room for everyone to fly and fun fliers are most welcome. The hangar does have occasional commercial operations which take precedance over our flying and also the roof has many holes. Do remember to ring Laurie Barr (tel 01628 487544) on the Fri or Sat before a meeting to confirm the meeting is on (on rare occasions we have to cancel because of operations in the Hanger).

Competitions would based on the best singkle flight from 5 (except for team trials). The handicap system for F1L and Limited Pennyplane with awards for 1st, 2nd and 3rd + best scratch time would be retained for all events other than the Nationals.The index events would be discontinued and F1D Beginner introduced. A new Individual National Championship would be established based on the results of the LPP, EZB, F1DMini-Stick, Nocal and F1D-Beginner events at the Nationals. Points towards the Championship would be awarded on the basis of 5 points for the winner, 4 for the second, 3 for the third

Indoor Flying in Florence (ITA)

For the first time in Italy, the local aeromodelling club of Florence has obtained the use of the town's sporting hall (ceiling of 8 mtrs) for regular winter training sessions in indoor flying, one evening in a month. All foreign indoor modelers are kindly invited (with or without models). Contact the Gruppo Aeromodellisti Fiorentini, P.O.Box 18250, 50100 Firenze, Italy. Or phone (english-german - french) to Carlo Pesciolini at xx39-(0)-55-221625.

1998 International Mini-Stick Postal

The Brainbuster Free Flight Club invite all indoor flyers to take part in the 1998 International Mini-Stick Postal Contest to be held over the winter period. The rules for the contest are as follows:
The contest is open to indoor models that comply with the Living Room/Mini-Stick rules.

1. Contest flights are to be made between 1 January 1998 and 31 March 1998.
2. Any number of flights can be made at any number of sites.
3. All contest flights to be timed by someone other than the flyer.
4. All contest fligths to be recorded on an official results form (from the address given below).
5. Best single flight time wins, after flight time has been corrected for different ceiling heights. Ceiling height to be measured as per the FAI, but with 5m diameter circle. The correction factor is 627 divided by (167 plus 46 times the square root of the ceiling height in feet). The time in seconds will be multiplied by this to give the corrected time.
6. Prizes will be awarded dependant on the number of contestants.
7. All results forms to be returned no later than 10 April 1998 to the address below.
8. Entry is free to all contestants.
9. Results will be sent to all entries, provided a SASE is included with the results form.

Contact address: Brainbusters, 112 Tillerson Dr., Newport News, VA 23602, USA.

Mini-Stick Rules:

Monoplane, max. span	7.0 in
Max. wing chord	2.5 in
Motorstick length	5.0 in
Max. model length less prop	10.0 in

Stab/tail area max. 50% of wing
Covering plastic/paper. No microfilm.
Propeller: wood prop, 7 in dia max.
Minimum weight 0.43 gr/0.015 oz.
FLYING: Steering 4 Ten sec; Attempts 15 sec or less

1998 EZB Postal Contest

Why? Because the US vs. Japan EZB Postal Contest has been cancelled this year. There will be two divisions: Division A: U.S.A. rule EZB. Division B: F1L EZB rules (1.2 gram minimum weight)

All flight must be launched before midnight (your local time) of April 31st, 1998. Everyone is allowed an unlimited amount of flights. You can submit your flight times as often as you want, and contestants may time their own flights. All flights will be adjusted using my ceiling fudge factor. This factor is slightly different than what has been used in the ministick postal, but it allows a record setting flight in a blimp hangar to compete with a record setting flight in a 20 foot gym. I have spent several hours on a worksheet deriving this and I believe it equalizes the playing field quite well. The currently used fudge factor requires a 20:00 flight in ministick in a 150 foot site to beat a 7 minute flight in an 8 foot site. Personally I think a 20:00 ministick flight should win hands down, no matter what the ceiling height is!) My 'double fudge factor', or 'dff' is:
1) for ceilings lower than 117 feet (35.66 meters):
dff=(685/(220+40*sqrt(ceiling height))+0.1
2) for ceilings greater than 117 feet (35.66 meters):
dff=1.15

1998 International Mini-Stick Postal

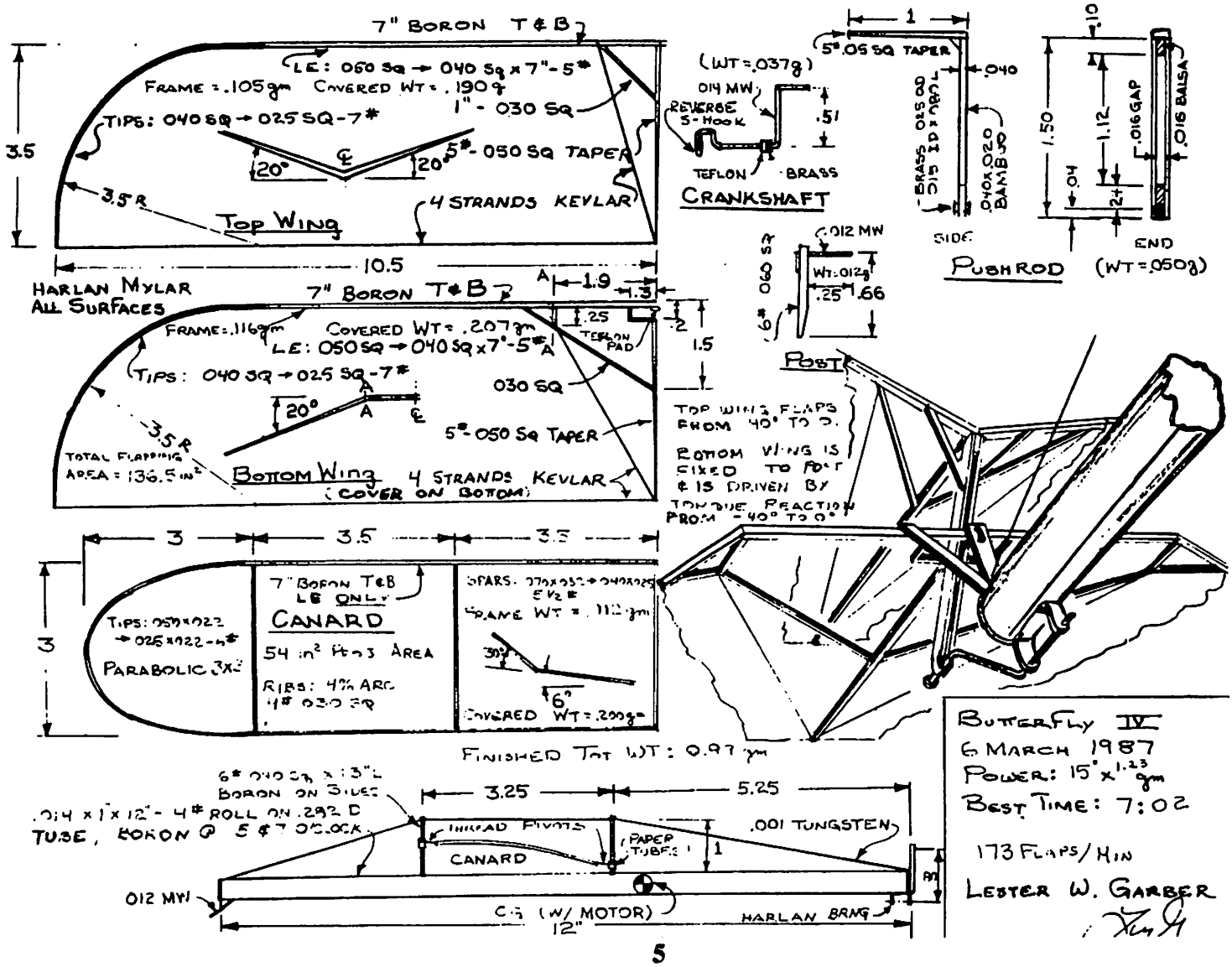
Indoor Postal Contest Results Form

Club Name_____

Date of Contest___/___/___ Site Name_____

Ceiling Height_____Feet

Contestant Name SMAE No. Age (if Jr.)	Address	Time in Seconds	Timer Initials	Leave Blank
		1.		
#		2.		
		3.		
		4.		
		5.		
		1.		
#		2.		
		3.		
		4.		
		5.		
		1.		
#		2.		
		3.		
		4.		
		5.		



BUTTERFLY IV
6 MARCH 1987
POWER: 15" x 1.23 gm
BEST TIME: 7:02
173 FLAPS/MIN
LESTER W. GARBER

Send your flight times along with:

1. ceiling height, date of flight
2. type flown: USA EZB or F1L EZB
3. your city and state (and country if needed)
4. and of course your name

To: dslusarc@stratos.net
or mail it to me:
Don Slusarczyk
868 Eaglewood Dr.
Willoughby, OH 44094 U.S.A.

The First International E-Mail A-6 Indoor Contest!

The A-6 is a simple entry level indoor stick model that flies well and is capable of 4 to 6 minutes duration in normally available sites. It is quickly built from available materials and can provide hours of enjoyment.

This contest is open to modelers worldwide flying the A-6 class indoor model. It is being held from September 25, 1997 through March 31, 1998. Flight times are to be submitted to the Contest Director, Roger Schroeder at the following e-mail address: rsch@idir.net .
Postal mail submissions are also acceptable. Send to: Roger Schroeder, 4111 West 98 St, Overland Park KS 66207, USA

A-6 MODEL RULES

The A-6 rules being used follow the simple rules established by Clarence Mather. They are:
1. 30 sq. in. maximum wing area (no limits on shape, or span)
2. 15 sq. in. maximum stabilizer area. (no limits on shape, or span)
3. 6 in. maximum propeller dia. The blades are to be flat, not cambered. (no limits on shape, or chord)
4. a 6 in. maximum motor stick length as measured from the propeller thrust bearing to the rear hook. There is no tail boom length limit.
5. All strip wood construction is to be a minimum of 1/16 x 1/16 in cross section. (e.g.; tail boom, wing, stab, rudder outlines). The 1/16 sq. wood may not be sanded to a rounded shape.
6. All sheet wood construction (e.g.; propeller blades, wing ribs, stab. ribs) is to be a minimum of 1/32 in. thick. Propeller blade edges may not be rounded.
7. All wing and stab. ribs are to be 1/32 x 1/16 minimum cross section.
8. Tissue covering only (Gampi tissue paper is best)
9. Only wood, wire and tissue materials can be used for construction.
10. Propeller shaft is to be 1/32 dia. wire minimum.
11. Rubber power only
12. No weight limits on model or rubber power.

CONTEST RULES

1. Fly in an indoor site any time from September 25, 1997 through March 31, 1998.
2. You may time your own flights.
3. Steering is acceptable if it is not used to control altitude.
4. Record your best single flight time and submit it to the contest director along with:
a. Your name
b. Your club or group, if any
c. Where flown, site, country, state or province
d. The date flown
e. The ceiling height (AMA/FAI measurement method)
f. A brief description of your model (a picture for posting on the web would be great)
g. It is permissable to use propellors that fit together by friction and whose pitch can be adjusted prior to a flight. It is not permissable to use propellors that change pitch during a flight.

Flight times may be normalized for comparison. With the data on hand the normalized flight time = [(Highest Ceiling Height) - (Local Ceiling Height)] x .315 + (Local Time)
Example:

Highest ceiling entered = 90 feet
Local ceiling = 20 feet
Local time = 97 sec.
Normalized time = (90-20) x .315 + 97 = 119 sec.

Note that the official normalized times will not be available until the contest is completed; interim scores posted on the Web will only be raw data, and will not represent final placing.

PLANS

You will find a discussion of the origin and philosophy of the A6 model written by Clarence Mather, the inventor of the model class, along with plans for his original model at: http://n-lemma.com/indoor/matha6.html

If you are looking for something more competitive, send Roger Schroeder (see e/snail mail address above) $2.00 ($3.00 outside USA) and he will send you an 11 x 17 plan of the model he is flying in the contest. Better yet, design your own! Some areas of experimentation are the stabilizer shape, wing aspect ratio, wing taper, balance point location, and tail boom length.

And, if you have pictures of your model and/or yourself, let us know. We'd be happy to set up a photo gallery for the First Ever International A6 Email Indoor contest!

Special A6 Contest Awards: Under 15 Event:

We plan to have a separate "under 15 yr old" class for youngsters that are beginning and who are being helped in the building and flying by adults. The emphasis will be on participation and not on hihg time or adjusted high time. Submit entries as per the web form, but be clear under comments that the entry is for the "under 15" class.

Flying Wings: Add the area of the A6 wing and horizontal tail; you get 45 square inches. A special trophy will be awarded to the person who meets all the other

contest rules, and submits the best adjusted time for a 45 sq in flying wing model.

A Good Story: Another special trophy will be awarded to the person who tells the best story about their A6 email contest flight.

There are no rules for this contest. It's a judjment call. With a bias toward those who are new to indoor, those who see the "oh, wow, this is fun" aspect of indoor flying, and a special bias toward younger modelers.

Send Flyiing Wing and story Entries to:
The A6 Web Wright: Del Ogren del@n-lemma.com .

Real A6 contest communication to:
Contest Director: Roger Schroeder

NOCAL FF ML Postal Contest

WHO: Anyone who would like to enter; FF ML (Free Flight Mailing List) membership is not a requirement.

WHY: Because FF modelers seem to like to measure their model's performance against their own best efforts and against the results of others.

WHEN: December 20, 1997 thru March 31, 1998.

WHERE: Fly wherever/whenever you like. The postal has two divisions: Outdoor, and Indoor.

Indoor times will be adjusted by a ceiling-equalizer factor:
Highest ceiling reported, divided by the entry's ceiling height, multiplied by the time reported. 'Pure', uncorrected times, along with ceiling heights will be recorded and, at the end of the contest period, they will be corrected.

WHAT: NOCAL models. FAC rules will be followed, except that there is a 2 min max for outdoor; if 3 max flights are achieved, then a 4th can be made with unlimited time.

There is no max time for indoor, but all indoor models must weigh a minimum of 6.2 grams (the weight of 2 US pennies), without motor. Weight can be checked using a simple stick beam balance with equal legs and 2 pennies on one end with the model hung from the other leg. Be sure to check the note below, in Hints & Tips, about the weights of US pennies.[i.e. use pre-1974 pennies!]

FAC membership is encouraged, but not required. Any design/designer is OK, but entrant certifies compliance with the FAC rules regarding recognizable scale model with proper markings, etc.

FAC NOCAL rules are listed below for those who might not have access to them, but what we're talking about is a scale, profile rubber model (& electric power, too!), of no more than 16" wingspan.

In both Indoor and Outdoor categories, the following events will be held:

"Kit/Plan 'stock' = plastic prop required"
"Unlimited = any wood, any prop"
"Electric = unlimited as to power, energy type/size"

HOW: Report your scores by email, telephone, or snail letter. Scores will be tabulated and available for viewing (all scores received each week) at this site as they begin to be reported. Report the 3 best flights in any series, no more often than once a week. Scores and the FAC NO-CAL rules will also be posted in hard copy -details to follow.

Please report: your name; 'kit/plan', 'unlimited', or 'electric'; 'indoor' or 'outdoor'; ceiling height if indoor; model name & designer; 3 best times + 4th, if applicable; and the date. Electric entries may include notes or specs on power or energy source if you like.

PRIZES: We will at least have some nice certificates. [prevailing thought seems to be that awards are not all that necessary].

Sponsor's Note

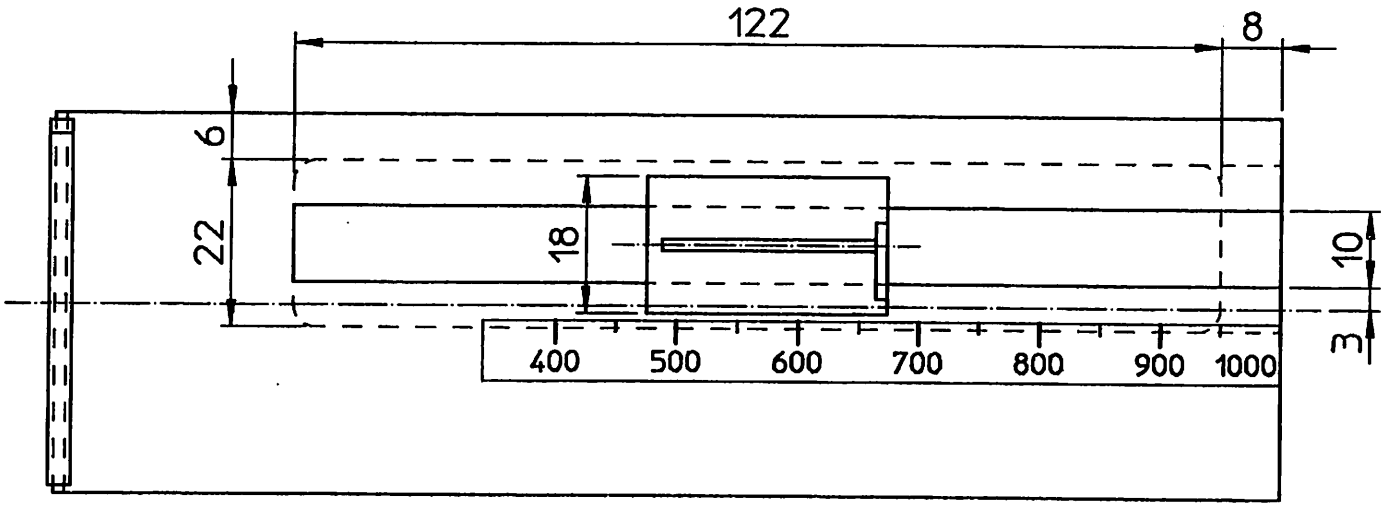
This contest is open to anyone's NOCAL designs. However, in order to encourage you to get started, the following 'deals' are offered:

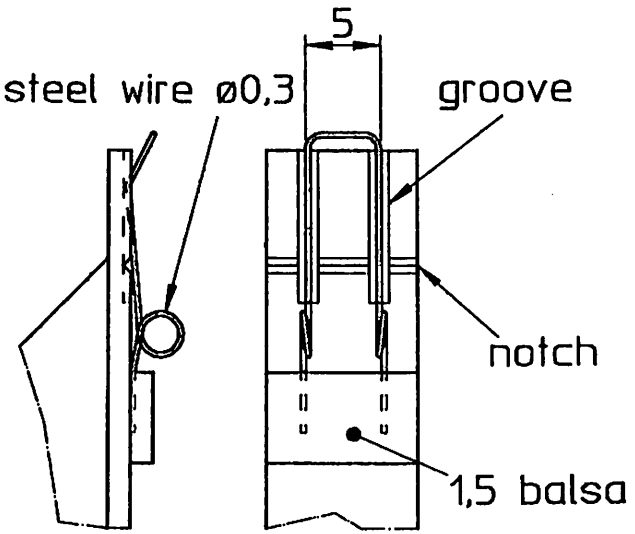
Any quantity of NOCAL plans from the AALmps list @ $1 each postpaid, or the whole set of 22 NOCAL plans (reg $18 + $3.60 Postage = $21.60) for $18 postpaid. AAL/mps, 1008 E. Baseline Rd., Suite 1074, Tempe, AZ 85283, USA.

FAC NOCAL NO-CAL PROFILE SCALE

1. A simple event for recognizable profile models with a wingspan limit of 16 inches.
2. Total of three flights to determine score. Highest total score wins. Fly-off to break ties.
3. Any flight of 20 seconds or longer is official. All flights to be hand launched. No maximum flight time.
4. Model must have control outlines, registrations numbers or letters, etc.
5. Model must be in correct color scheme, have documentation to prove it.
6. Model must also have full landing gear. No profile gears. Retractable gear may be built in the up position.
7. All wing struts must also be on the model. Judges decisions are final. (Note from Bob Clemens: It's interesting to note that Rule #7 was severely ignored in the past, especially at the USIC in Johnson City. Some strutted aircraft modeled with NO struts at all. Boooo!)

Send results to: AAL/mps, 1008 E. Baseline Rd., Suite 1074, Tempe, AZ 85283, USA.

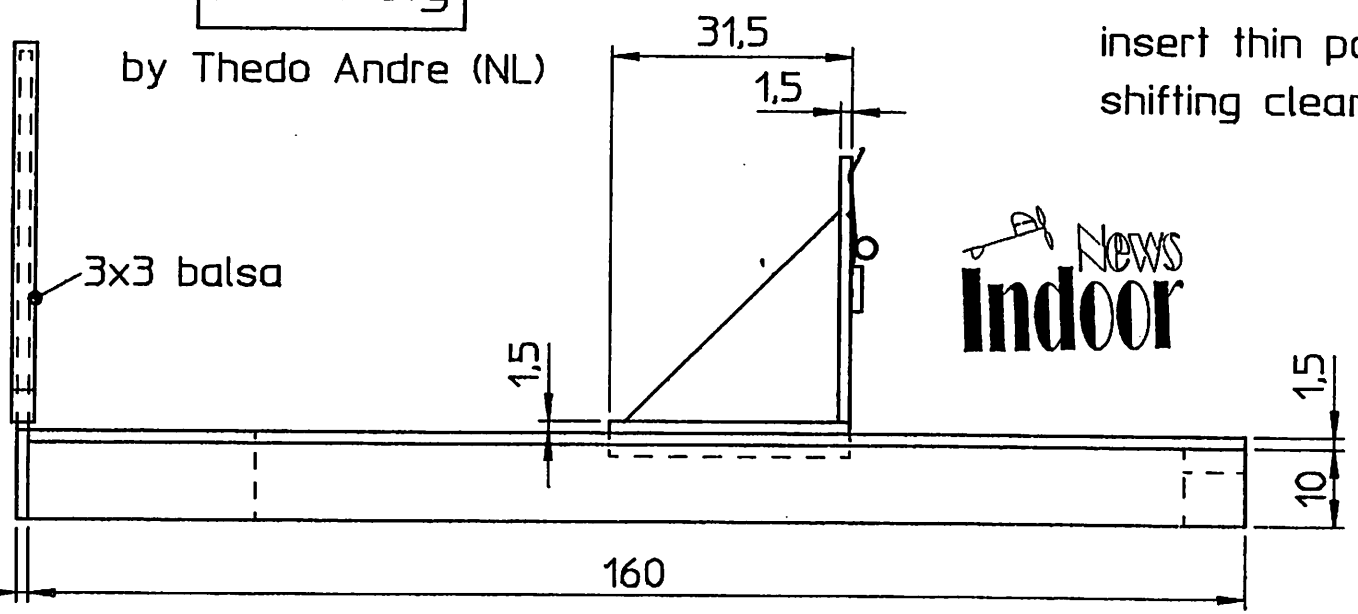


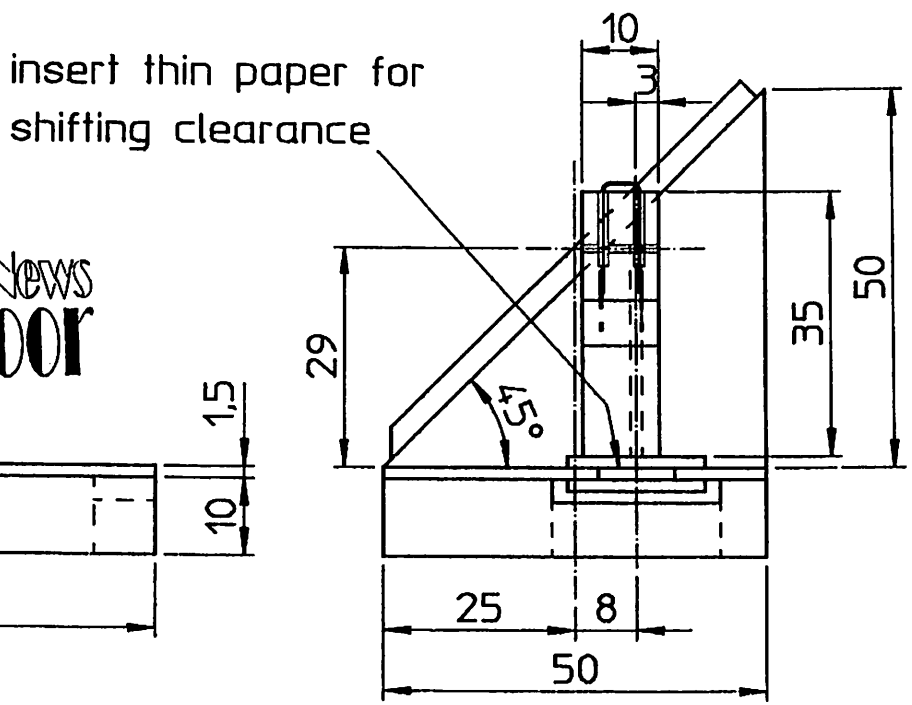


Detail
Scale 2:1

Pitch Jig

by Thedo Andre (NL)





Material 1,5 ply, unless otherwise stated

From Indoor News & Views

SURVEY FOR FUTURE FID RULES CHANGE

Richard Doig contacted most of the people on the current Team Selection Voting list and asked 5 questions.

1. How do you feel about reducing the span to 55cm, apart from any other rules change.

2. How do you feel about changing to plastic and abandoning film.

3. How much microfilm do you have, and how long do you expect it to last if its all good.

4. How do you feel about a rules formula that includes a maximum total area, wing plus stab.

5. How do you feel about a rules formula that includes a maximum rubber weight.

FID Rules Change Survey

Flyer	55CM	Plastic	Film Supply	Area	Rubber
Brown	no	no	3 years	no	no
Richmond	no	no	lifetime	no	no
Leonard	undecided	no	2 years	no	no
Leonard Jr.	undecided	no	2 years	undecided	no
Obarski	yes	maybe	3 Oz.	yes	no
Clem	yes	yes	12 Oz.	no opinion	no
Vallee	no	no	3 years	maybe	no
Coslick	yes	yes	36 Oz.	yes	no
Underwood	no	no	16 Oz.	no	no
Berieff	yes	yes	none	no	no
Harlan	yes	no	Plenty	no	no
Randolph	undecided	no	lots	no	no
Doig	no	no	15 years	no	no
Williams	yes	yes	32 Oz.	no	no
Shepard Jr.	yes	undecided	1 year	no	no
Grant	yes	yes	3 years	no	no
Tagliafico	yes	yes	1 year	yes	no
Soua	yes	no	4 years	no	no
Hulbert	yes	yes	some	no	no
Chilton	yes	yes	10 years	no	no
Banks	no	no	3 years	no	no
	57% yes	43% yes	N/A	24% yes	0% yes

Press Release 1st Jan. 1998

FAO: INDOOR NEWS

Indoor flight is at the dawn of a bright new development phase. New Ceto multi channel proportional radio, lightweight foam construction, super scale detailing, high quality paint finishes, super efficient electric motors, gears and props are all now available. The AeroNutz would like to see these come together and crystallise into beautiful, R/C indoor flying machines capable of slow scale speed flights of about 2 to 3 minutes. The worlds Aero modellers are invited to:-

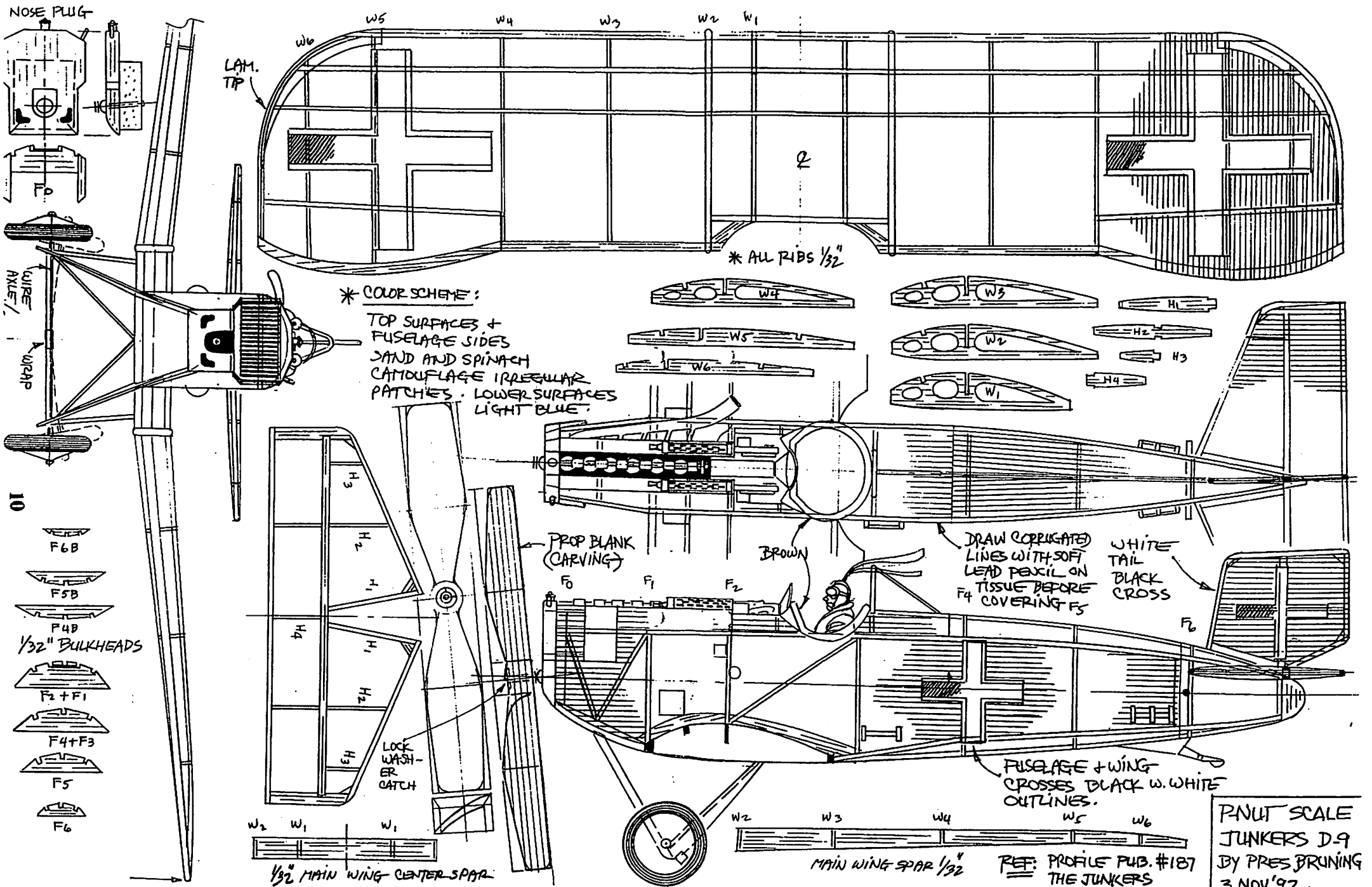
AeroNutz
National Indoor
Schneider Cup
sea plane challenge

Open to all - groups, clubs, individuals, colleges, Universities

It is proposed that several fly in's will be held at various indoor venues, hopefully with a lake to fly off water during the winter 98/99 period. You have until October to produce your first design and we are keen to see designs developed in future. As a rough guide bi planes should be about 20" (500mm) span and mono planes should be about 27" (700mm) span. We are hoping for a fun atmosphere with lots of innovation, ideas being swapped, and camaraderie. If you are new to indoor flight or electric flight please send two Sae's and we will send the addresses of specialist suppliers and some cheat sheets to get you started. Aero Nutz are a non profit, fun flying, innovative group who started Aero towed free fight indoor gliding and specialise in white sheet foam designs for rubber power.
If you would like to redgister an interest or have any ideas, venues, suggestions, please send a SAE to:

South Leicester AeroNutz

Mark
99A Knighton Church Rd
Leicester LE2 3JP


NOSE PLUG
F0
WIRE AXLE
WRAP
W6
W5
W4
W3
W2
W1
LAM. TIP
* ALL RIBS 1/32"
* COLOR SCHEME:
TOP SURFACES & FUSELAGE SIDES SAND AND SPINACH CAMOUFLAGE IRREGULAR PATCHES. LOWER SURFACES LIGHT BLUE.
H1
H2
H3
H4
PROP BLANK (CARVING)
BROWN
DRAW CORRUGATED LINES WITH SOFT LEAD PENCIL ON TISSUE BEFORE F4 COVERING F5
WHITE TAIL BLACK CROSS
F6
F0
F1
F2
F4
F5
F6B
F5B
F4B
1/32" BULKHEADS
F2+F1
F4+F3
LOCK WASHER CATCH
1/32" MAIN WING CENTER SPAR
MAIN WING SPAR 1/32"
FUSELAGE & WING CROSSES BLACK W. WHITE OUTLINES.
REF: PROFILE PUB. #187 THE JUNKERS MONOPLANES
PNUT SCALE JUNKERS D-9 BY PRES BRUNING 3 NOV '92

From P-Tech

Dutch Indoor Championships 1997

20 december 1997, Sporting Hall UT Twente, Enschede (Ceiling 9 meter)

Just before Christmas the Dutch Indoor Championships 1997 were held in the Sportshall of the Technical University of Twente. The contest was organised by the school aeromodelling club of the Kottenpark College in Enschede. The championship was for the F1D-Beginner class only, but other classes like Bostonian and the fun "Wortel"-class (a large Delta Dart) were flown as well. This contest is always charactarized by a fine atmosphere and a large participation of juniors and beginning flyers. Two-thirds of the entries were juniors, which shows how well suitable indoor flying is as an introductory to aeromodelling.

F1d-beg

name	1	2	3	4	5	6	score
1. David Lentink	569	649	**800**	**782**	-	-	**1582**
2. Noud Koetsier	357	537	351	419	**636**	**703**	**1339**
3. Hubert Meulman	**659**	**621**	-	-	-	-	**1280**
4. Suzanne van Egmond	515	501	**558**	**543**	531	-	**1101**
5. Arjan Saathof	**539**	497	524	**537**	504	-	**1076**

Moustique

name	1	2	3	4	5	6	score
1. Hubert Meulman	55	**473**	**460**	-	-	-	**933**
2. Gerrit de Kruijff	301	226	302	**305**	**332**	-	**637**
3. Hugo de Bruijn	258	**277**	248	**275**	245	215	**552**
4. Martin Albers	228	233	249	230	**263**	**264**	**527**
5. Buddy Zwiep	**249**	**257**	242	-	-	-	**506**
6. Gijs Oosterhuis	**222**	188	175	208	115	**271**	**493**
7. Stefan Pouwelsen	**151**	108	132	**207**	137	143	**358**
8. Jordy Tolner	**116**	33	25	**44**	-	-	**160**

Wortel

name	1	2	3	4	5	6	score
1. Gijs Oosterhuis	94	79	99	98	**126**	**126**	**252**
2. Buddy Zwiep	101	**104**	**122**	103	-	-	**226**
3. Hugo de Bruijn	56	77	74	67	**88**	**86**	**174**
4. Ruud Kurvers	**64**	**67**	-	-	-	-	**131**
5. Martin Albers	**61**	49	**58**	35	-	-	**119**
6. Jordy Tolner	46	**50**	**47**	29	37	41	**97**

Bostonian

name	1	2	3	4	5	6	score:
1. Aran Homeijer	42	**49**	36	18	33	**54**	**103**
2. Arnoud Westeneng	**54**	**47**	-	-	-	-	**101**
3. Bartjan Polman	26	**45**	**47**	29	34	26	**92**
4. Martin Albers	**39**	**36**	21	-	-	-	**75**
5. Leon Oude Aarrinkhof	**30**	19	**41**	22	30	30	**71**
6. Tim Grandman	**10**	**17**	-	-	-	-	**27**

Finnish F1D-B Championships 1997

15 November 1997, Loviisa

Report by Tapio Linkosalo
<http://www.metla.fi/pp/Tlin/FFTF/indoor/f1dbsm97.html>

The first ever Finnish Championships in F1D Beginner were held on 15th of November 1997 in Loviisa. The conditions to fly, as well as the level of flying was good, making a nice, high-level competition for the 10 participants. The F1D-B competition class has become quite popular in Finland. Hopefully this trend will continue giving a new rise to the indoor flying in Finland. The ceiling heigth is 9 metres.

The winner of this first ever Finnish Championships was Janne Laurén, a junior from the Vallila Model Club. The runner-up, Tapio Linkosalo, representing the Kuopio Model Club, made the best flight of the competition, and the first flight over 8 minutes in Finland, but Janne's consistency ensured his victory. The third place was won by a newcomer, Riku Hagelberg, in his very first competition. Two weeks before the competition he had not even finished his first model!

The competition was run on a tight schedule, with 3 hours time to make the competition flights. Also the rules were strictly followed, for example the competitors had to check their rubber motors before every flight to make sure they were not overweight. Still the competition ran smoothly, leaving no questions about the results.

F1d-beg

name	1	2	3	4	5	6	score
1. Janne Lauren (J)	5'58	4'29	**7'46**	**7'46**	6'29	-	**15'32**
2. Tapio Linkosalo	7'01	**7'14**	**8'05**	6'05	7'04	2'22	**15'19**
3. Riku Hagelberg	3'45	**6'37**	**5'58**	5'01			**12'35**
4. Juha Heikkinen	3'36	3'38	5'02	5'26	**5'54**	**5'44**	**11'38**
5. Leo Santala	**5'26**	3'55	**5'17**	5'07	5'10	5'10	**10'43**
6. Harri Raulio	**4'49**	4'44	**5'22**	2'28	2'21		**10'11**
7. Lasse Nyberg (J)	2'13	2'23	2'40	**4'55**	4'09	**4'30**	**9'25**
8. Kai Halsas	**4'12**	2'47	2'31	3'45	**5'11**	3'38	**9'23**
9. Kari Heikkala	1'36	**3'42**	**3'17**	1'23			**6'59**
10. Antti Tuominen	2'07						**2'07**

Championnats de France vol d'intérieur - MONT DE MARSAN 1997

Catégorie : ***F1D Microfilm***

	Nom Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Total
1	CHAMPION Robert	C.A. Touraine	21.10	11.55	10.34	25.20	0.00	0.00	2790
2	CHABOT Sylvain	C.A. Touraine	7.39	11.23	8.43	18.45	16.49	20.03	2328
3	TRACHEZ André	Azay le brulé	1.47	18.40	16.26	16.44	13.05	3.50	2124
4	FRUGOLI J.Francis	Marseille	16.05	4.53	4.19	18.57	12.50	2.48	2102
5	HUA-NGOC Trung	Pessac	0.00	0.00	0.00	2.53	12.35	15.23	1678
6	COGNET Guy	A.C. Poitou	8.50	3.24	11.49	8.12	2.09	1.10	1239

Catégorie : ***F1D Beginer***

	Nom Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Total
1	COMET Jacques	A.C. Landes	10.20	11.04	11.07	6.54	5.50	11.11	1338
2	VALERY Jacques	A.C. Landes	3.35	5.20	2.20	5.46	11.31	10.11	1302
3	CHAMPION Robert	C.A. Touraine	7.45	7.20	11.34	10.06	2.05	4.29	1300
4	DUCASSOU Francois	A.C. Landes	10.44	10.11	10.28	5.32	3.03	8.39	1272
5	ROCH Edmond	A.A. Marcel Laurent	9.15	10.37	7.04	6.10	7.29	0.00	1192
6	SUISSA Nicolas	M.A.C. Marseille	4.47	9.37	9.04	4.10	0.00	6.31	1121
7	PAILHE Pierre	A. Pénaud	6.47	7.37	7.51	0.00	2.16	3.57	928
8	LOUBERE Gabriel	A.C. Landes	7.45	6.15	7.36	5.27	2.20	0.00	921
9	YRONDE François	Aérospatiale	0.00	0.00	0.00	6.24	6.30	2.56	774
10	DARROUZEZ J.Pierre	A.S.C. Pessac	3.45	1.03	0.00	5.34	6.04	5.48	712

Catégorie : ***F1L (E Z B)***

	Nom Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Total
1	DUCASSOU Francois	A.C. Landes	9.11	5.10	6.08	13.34	13.43	14.18	1681
2	VALERY Jacques	A.C. Landes	11.58	8.08	1.28	13.00	13.16	14.22	1658
3	GRANGE Yannick	A.A. Marcel Laurent	10.16	11.35	8.09	10.04	12.37	9.40	1452
4	ROCH Edmond	A.A. Marcel Laurent	3.40	0.19	11.13	11.57	11.37	5.12	1414
5	FRUGOLI J.Francis	M.A.C. Marseille	5.14	8.36	2.00	13.52	3.05	6.50	1348
6	CHAMPION Robert	C.A. Touraine	5.55	8.41	7.50	11.01	8.19	10.55	1316
7	YRONDE François	Aérospatiale	6.53	6.18	3.11	7.42	9.19	6.30	1021
8	SUISSA Nicolas	M.A.C. Marseille	3.30	2.24	0.00	5.14	6.51	6.26	797

Catégorie : ***Micro 35 Sénior***

	Nom Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Total
1	COGNET Guy	A.C. Poitou	13.33	0.15	10.43	14.32	17.21	0.00	1913
2	FRUGOLI J.Francis	Marseille	14.17	1.20	13.27	4.35	15.48	13.15	1805
3	CHAMPION Robert	C.A. Touraine	14.17	4.50	13.35	14.12	12.59	0.00	1709
4	VALERY Jacques	A.C. Landes	4.20	8.07	5.54	12.55	15.24	2.02	1699
5	ROCH Edmond	A.A. Marcel Laurent	9.57	9.22	9.41	12.14	13.16	11.34	1530
6	GRANGE Yannick	A.A. Marcel Laurent	8.39	11.06	10.55	1.34	9.52	9.14	1321
7	COMET Jacques	A.C. Landes	9.20	2.18	10.57	10.39	1.28	0.00	1296
8	BAUTZ Emmanuel	A.C. Poitou	7.41	0.17	7.53	9.03	11.02	0.00	1205
9	PENETIER Frédéric	A.C. Poitou	8.23	8.47	0.00	5.07	8.36	0.00	1043
10	DRAPEAU Ameline	Azay le Brulé	8.00	8.17	4.18	2.00	1.11	8.49	1026
11	LOUBERE Gabriel	A.C. Landes	6.53	7.25	0.00	5.22	3.19	6.36	858
12	GROGUENNEC Vincent	Sèvre Anjou Modellisme	3.44	2.03	1.14	4.42	6.44	6.59	783
13	DARROUZEZ J.Pierre	A.S.C. Pessac	2.03	6.21	0.00	4.48	0.00	3.35	669

Catégorie : ***Micro 35 Cadet / Junior***

	Nom Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Total
1	CHABOT Sylvain (J)	C.A. Touraine	7.56	10.03	10.04	10.50	8.00	8.15	1254
2	SUISSA Nicolas (J)	M.A.C. Marseille	4.01	4.08	6.28	7.13	6.56	10.56	1089
3	MONGIN Olivier (J)	A.C. Landes	5.24	2.30	0.00	6.54	7.40	7.41	921
4	LARTIGUE Florent (J)	A.C. Landes	7.16	4.38	3.32	5.30	7.23	7.21	884
5	COURTOT Christopher (C)	A.C. Landes	1.50	1.59	2.22	7.05	7.25	7.11	876
6	YRONDE Clément (C)	Aérospatiale	6.01	6.47	5.56	6.10	2.22	6.57	784
7	NAIVIN Michaël (J)	A.S.C. Pessac	3.22	4.15	4.52	5.47	5.52	6.07	719
8	CREPIEUX Jérémy (C)	A.Penaud	1.54	3.20	1.53	3.35	4.13	3.50	483

Vol 6 & 7 Here Now!! Lots of stick & tissue plans / how-to! Best of the Hangar Pilot Vol 6 & 7 only $7 ea ppd USA to:



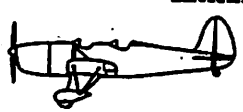
Dave Linstrum
815 W 300 S #2
Provo UT 84601
USA

23 Years of Indoor!
Complete your set: back issues of Vol 1,2,3 $20/set Vol 4,5 $14/set
These contain plans for the best flying models by MIAMA's talented designers!

It's NOT just a Calendar !!!
1995 Scale Flyer Calendar contains 14 Planes Worth Modeling, with building plans for contest winners including Swiss 1921 Dornier Falke. Hang in your shop/ build from it!!! ON SALE only $4 ppd or $3 with any Best of the Hangar Pilot order above! You tried the rest- now get The Best!

Foreign P & H add $2 / vol for Air Mail UK/Eur

"MAKING SCALE MODEL AIRPLANES FLY"



William F. McCombs

(1997 Revision)



Many readers have asked to be notified when a new revision of the book will appear.. The 1997 revision has been completed and is now available.

The 1997 revision is about 16% larger in content than the previous one. There are numerous additions to the existing text and also an extensive new Appendix C. The new appendix contains numerous topics such as spoked wheels, gears for rubber motors, area calculation methods, simulated radial engines (cowled), non-climbing motor hooks, 1914-19 machine guns, free-wheeling with spinners on props, torn tissue/silk repairs, Peanut model design guides, rear hooks, airfoil evaluation method, copier printing on tissue, enlarging/reducing plans, the critical climb angle, transferring patterns to balsa sheet and other topics.

For those who are not familiar with the book, it is published by Aircraft Data, discusses both scale and nonscale FF models and has been highly recommended over the years in the model magazines and in FF club newsletters.

The current price is $14.95 plus $2.00 shipping. Order from William McCombs, 2106 Siesta Dr., Dallas, TX 75224. Also available 24 great-flying Peanut plans, $17.95+2.00 or send SASE for listing and individual prices. Pay by money order or cash only.

Postal

Danish Indoor Championships 1997

P-15			
1.	Andreas Zambach	93+91 sek	184 sek
2.	Christian Zambach	90+81 -	171 -
3.	Morten P.	77+72 -	149 -
4.	Frank Dahlin	68+67 -	135 -
5.	Hans Jørgen Larsen	67+53 -	120 -
6.	Rune Nørgaard	54+30 -	84 -
7.	Erik Knudsen	44+00 -	44 -

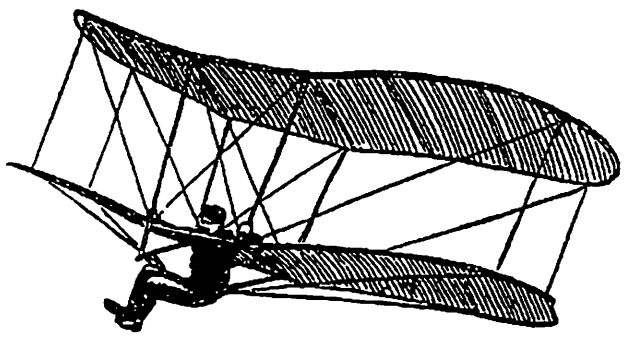
Chuckglider			
1.	Jørgen Korsgaard	29+27 sek	56 sek
2.	Hans Jørgen Larsen	22+19 -	41 -
3.	Hugo Ernst	20+20 -	40 -
4.	Frank Dahlin	19+18 -	37 -
5.	Stefan Zambach	10+10 -	20

Peanut			
1.	Erik Knudsen	49+45 sek	94 sek
	Piper PA- 18		
2.	Erik Knudsen	52+38 -	90 -
	Piper Vagabond		
3.	Simon Jonassen	31+24 -	55 -
	Nesmith Cougar		
4.	Frank Dahlin	21+18 -	39 -
	Pilatus Porter		

EZB			
1.	Jørgen Korsgaard	7.10+8.19 min	15.29 min
2.	Simon Jonassen	7.43+6.52 -	14.35 -
3.	Frank Dahlin	7.02+6.58 -	14.00 -

F1D			
1.	Hugo Ernst	2.42+3.56 min	6.38 min

35 cm		
1.	Hugo Ernst	2.36 min



Kit review
The Flapping Flyer from Indoor Model Supply

There is a rubber - powered ornithopter kit available which makes a great first ornithopter or a reliable model for the more experienced. The Flapping Flyer can be flown outdoors in the absence of wind. It is a monoplane with a 24 inch span, and it reaches a height of 25 feet. It will fly for 90 seconds, which is longer than most ornithopters even if it isn't record material.

I decided to build a Flapping Flyer because, although I had experimented with ornithopters for a number of years, I still did not have anything capable of much duration. The Flapping Flyer answers this need and is very consistent.

Building the kit is not too difficult and I did it in one weekend. The plans are very thorough, and although they seem to have a few errors, none of these is a problem. Previous model-building experience is a must, but previous ornithopter experience is not.

A few things should be kept in mind when building the Flapping Flyer. CA glues will do everything they can to get into the moving parts, of which there are many, so be careful. Also note that the fin is below the stabilizer unlike in most airplanes, and that it's easy to ignore the tail's orientation when attaching it to the motor stick. Attaching the wing assembly to the motor stick involves a series of struts. Getting these to line up might be tricky but the use of white glue in this step allows you time to work with it. Overall, the Flapping Flyer is a great kit, and I enjoyed building it. Hopefully, information on this kit will encourage some of the OMS members who haven't built an ornithopter to give it a try.

The Flapping Flyer is available from Indoor Model Supply, Box 5311, Salem, Oregon 97304, phone 503-370-6350. Costs $8.95 plus $3.50 s&h.

If you want to try building a simpler model, and if you don't mind working from plans instead of a kit, try the 19" Manta Ray Ornithopter, item BH-125, from Peck-Polymers, Box 710399, Santee, CA 92072-0399, phone 619-448-1818. $1.80 for plans, $3.00 s&h.

Concours de vol libre d'intérieur du 21 Décembre 1997
ORLEANS - LA SOURCE

MICRO 35 JUNIOR

Pl	NOM	Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Points
1	DUPUIS	Michaël	UAO	5.40	4.30	2.59	2.11	4.00	4.17	10.10
2	MAGDELEINE	Sylvain	UA O	3.27	2.51	2.34	2.52	3.16	3.57	7.24

MICRO 35 SENIOR

Pl	NOM	Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Points
1	HUA-NGOC	Trung	Pessac	11.31	11.44	-	-	-	-	23.15
2	ROCH	Edmond	AAML	2.13	9.38	9.41	11.36	9.56	5.30	21.32
3	CHAMPION	Robert	CA tour.	6.42	8.37	8.53	-	-	-	17.30
4	GRANGE	Yannick	AAML	8.15	8.03	7.22	6.58	6.50	6.42	16.18
5	BAUTZ	Emmanuel	Poitou	6.07	6.11	5.34	5.27	6.27	5.34	12.38
6	PENETIER	Frédéric	Poitou	1.17	1.42	3.18	0.24	1.24	2.44	6.02

CACAHUETE SENIOR

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Stat	Points
1	DAVID	Christophe	Cambr	PC6	0.57	0.54	0.53	0.54	0.54	140	23100
2	DELCROIX	Jacques	UA Orl	Tremp	0.45	0.50	0.40	0.42	0.51	144	21024
3	DELCROIX	Jacques	UA Orl	P 180	0.26	0.37	0.54	0.49	0.48	138	20838
4	BOURDEAUD'HUI	J Claude	AC Go	Poull	0.15	1.06	0.55	0.43	0.50	102	17442
5	BOURDEAUD'HUI	J Claude	AC Go	P 100	0.42	0.57	0.42	0.13	0.45	110	15840
6	DAVID	Christophe	Cambr	Hyper	0.34	0.34	0.30	0.35	-	148	15244
7	BOURDEAUD'HUI	J Claude	AC Go	LS60	0.28	0.50	0.51	0.50	0.38	88	13288
8	CARTIGNY	Jacques		SFAN	0.26	0.25	0.38	0.31	0.22	118	11210
9	BAUTZ	Emmanuel	Poitou	Farm	0.25	0.31	0.37	0.44	0.37	90	10620
10	DELCROIX	Jacques	UA Orl	RS7	0.23	0.23	0.17	0.29	0.21	138	10350
11	PENETIER	Frédéric	Poitou	Farm	0.27	0.33	0.17	-	-	106	8162

MAQUETTE CACAHUETE

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Stat	Points
1	DAVID	Christophe	Camb	Blé 25	0.20	0.20	0.20	-	-	166	9960
2	CARTIGNY	Jacques		Lohn.	0.20	0.17	0.20	0.20	-	144	8640

CACAHUETE JUNIOR

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Stat	Points
1	CHERON	Samuel	UA O	P 100	1.04	-	-	-	-	112	7168

PISTACHIO

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Stat	Points
1	DAVID	Christophe		Blé 25	0.20	0.20	0.20	-	-	156	9360
2	CARTIGNY	Jacques		FW	0.20	0.20	0.20	0.20	0.20	144	8640
3	CARTIGNY	Jacques		F 84	0.20	0.20	0.20	0.20	0.20	142	8520
4	DAVID	Christophe		20T	0.20	0.20	0.20	0.20	0.20	116	6960
5	BOURDEAUD'HUI	J Claude		P 100	0.20	-	-	-	-	118	2360

SAINTE FORMULE JUNIOR

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Points
1	MAGDELEINE	Sylvain	UA Orléans	St Ethique	0.37	1.34	1.20	1.19	2.54

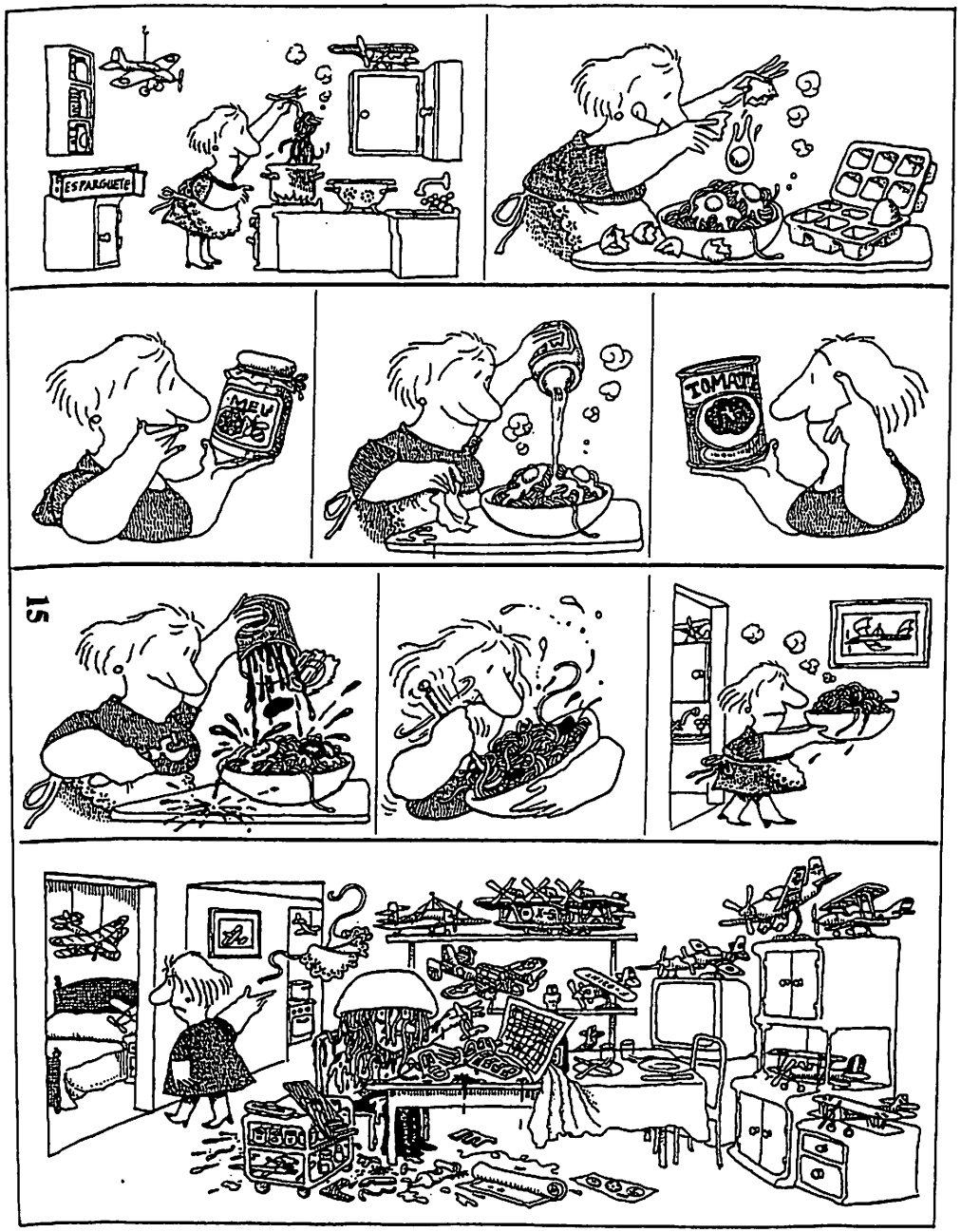
SAINTE FORMULE SENIOR

Pl	NOM	Prénom	Club	Mod	Vol 1	Vol 2	Vol 3	Vol 4	Points
1	ROCH	Edmond	AAML	05	3.40	3.16	-	-	6.56
2	FOURNIER	J Marc	CAM	St Etique	2.57	3.04	-	-	6.01
3	FOURNIER	J Marc	CAM	St Pierre	2.40	2.10	2.54	1.42	5.34
4	PENETIER	Frédéric	Poitou	St Plait	1.33	2.45	2.44	2.16	5.29
5	BOURGOIN	J Claude	Goelands	01	2.30	2.20	2.06	2.54	5.24
6	BAUTZ	Emmanuel	Poitou		2.34	0.45	2.02	2.39	5.13
7	BOURGOIN	J Claude	Goelands	02	1.56	2.42	2.18	2.11	5.00
8	BESSE	Alain	UA Orléans	St Ethique	1.57	1.48	1.10	1.34	3.45
9	FOURNIER	J Marc	CAM	Saintol	1.35	-	-	-	1.35

F1D BEGINNER

Pl	NOM	Prénom	Club	Vol 1	Vol 2	Vol 3	Vol 4	Vol 5	Vol 6	Points
1	HUA-NGOC	Trung	ASCPA	7.13	7.37	8.42	10.22	10.09	-	20.31
2	CHAMPION	Robert	CA Tour.	4.42	5.56	8.57	8.33	11.07	-	20.04
3	ROCH	Edmond	AAML	9.33	8.27	2.24	8.52	10.03	5.45	19.36
4	BESSE	Alain	UA Orl.	5.31	3.37	2.14	5.24	6.16	3.40	11.47
5	MARILIER	Thierry	MACM	4.07	3.45	4.55	4.01	3.51	4.04	9.02

L'équipe vous remercie de votre participation, vous souhaite de bonnes fêtes de Noël et vous dit à l'année prochaine...



Submitted by Bob Meuser:

Perhaps you have seen the following classified ad in the model-aviation magazines (eg., Model Aviation, October 1997, p76):

> **Forget Bernoulli!** Learn how airplanes really fly with "Newtonian Aerodynamics Fundamentals," 120 pages, 85 illustrations. From Regenerative Press, 1900 Romine Road, Anderson, IN 46011. $17.00 postpaid in US or $22 Canadian.

Hogwash! Balderdash! Nonsense! Lies, lies, lies! Now you can learn the real truth!

> **Forget Bernoulli! Forget Newton!** Learn how airplanes really ***really*** fly with "Quantum-Gravity Aerodynamic Fundamentals." From Degenerative Press, 4200 Gregory St, Oakland, CA 94619. $1E+07, postpaid. U.S. only.

While largely ignored by mere engineers, it is well known in modern physics that what we call gravity is simply the result of the mutual attraction of gravitational quanta, called gravitrons. What is less well known is that there also exist antigravitational quanta, called antigravitrons. All matter contains gravitrons, antigravitrons, or both. Gravitrons attract other gravitrons. Antigravitrons attract other antigravitrons. On the other hand, gravitrons and antigravitrons repel each other. The total numbers of gravitrons and antigravitrons in the universe are about equal. The slight imbalance, about one part in ten to the twenty-third power, accounts for the expansion of the universe. Their existence accounts for the "seventh force" holding atomic nuclei together.

Continuous conversion of gravitrons into antigravitrons on the surface of the aircraft results from quantum-frictional effects between the aircraft and the air. The lift force acting on the aircraft is the result of mutual repulsion between antigravitrons on the surface and the gravitrons in the earth. For an aircraft in steady flight, the surface density of antigravitrons reaches a point of saturation, and the excess antigravitrons are continuously shed into the wake at the same rate as they are produced. The drag of the aircraft is the result of the attractive forces between the antigravitrons on the surface and those in the wake. The weight of the aircraft is the sum of all the attractive forces between the antigravitrons on the aircraft and those within the earth. In steady flight, the lift and weight balance each other.

The rate of production of antigravitrons by a surface such as a wing is proportional to the area, the square of the velocity, and up to a point, the tangent of the angle of inclination to the airstream. Beyond that point, called the "saturation condition of the second kind", the effect reverses; an increase in angle results in a decrease in the rate of production. The effect is what we call the stall.

All observed aerodynamic phenomena can be explained quantitatively in terms of similar quantum-gravitational effects. It is to be noted that one of the major contributing factors to air-to-air collisions between aircraft is the mutual attraction of their antigravitrons.

FORTY MINUTE CLUB

JANUARY 1998

NAME	COUNTRY	TIME	1*	2*	YEAR	SITE
BROWN, STEVE	USA	63:54	X		1996	SANTA ANA
RICHMOND, JIM	USA	56:35	X		1996	AKRON
RANDOLPH, BOB	USA	55:06	X		1993	SANTA ANA
BROWN, STEVE	USA	53:45		X	1997	SANTA ANA
ASLETT, BERNARD	UK	52:22	X		1983	CARDINGTON
UNDERWOOD, GARY	USA	51:58		X	1996	LAKEHURST
KOWALSKI, DICK	USA	50:41	X		1976	AKRON
DOIG, RICH	USA	50:41		X	1995	AKRON
BANKS, CEZAR	USA	49:50		X	1996	MOSCOW, IDAHO
RICHMOND, JIM	USA	49:44		X	1997	SANTA ANA
ROMAK, BUD	USA	49:35		X	1991	LAKEHURST
RANDOLPH, BOB	USA	49:31		X	1995	AKRON
BARR, LAURIE	UK	49:29		X	1996	CARDINGTON
HUNT, BERNARD	UK	49:07		X	1997	CARDINGTON
COSLICK, LARRY	USA	48:16		X	1997	SANTA ANA
SLUSARCZYK, DON	USA	48:10		X	1995	AKRON
BUTTY, RENE	SWI	48:01		X	1996	MOSCOW, IDAHO
KAGAN, JOHN	USA	47:58		X	1997	SANATA ANA
ROHRBAUGH, AL	USA	47:40	X		1997	AKRON
HARLAN, RAY	USA	47:13		X	1980	AKRON
ROBBINS, HERB	USA	46:41	X		1997	SANTA ANA
DOIG, RICH	USA	46:24	X		1983	AKRON
OTA, KENICHI	JPN	46:16		X	1996	MATUMOTO CITY
LOUCKA, LARRY	USA	46:14		X	1995	AKRON
CHILTON, STAN	USA	46:10		X	1994	AKRON
McGILLIVRAY, JACK	CAN	45:57		X	1996	MOSCOW, IDAHO
RODEMSKY, ERV	USA	45:50	X		1974	SANTA ANA
RIEKE, K. H.	GER	45:40	X		1962	CARDINGTON
MERKT, THOMAS	GER	45:27		X	1996	MOSCOW, IDAHO
GIBBS, BOB	USA	45:23		X	1995	SANTA ANA
REDLIN, CARL	USA	45:17	X		1962	CARDINGTON
ANDREWS, PETE	USA	44:59		X	1979	AKRON
MATHER, CLARENCE	USA	44:44	X		1974	SANTA ANA
ASLETT, BERNARD	UK	44:37		X	1985	CARDINGTON
DE BATTY, BOB	USA	44:35		X	1996	SANTA ANA
NICOARA, VASILE	ROM	44:30		X	1996	MOSCOW, IDAHO
HULBERT, BILL	USA	44:27		X	1994	AKRON
HACKLINGER, MAX	GER	44:20	X		1961	CARDINGTON
NORE, PENTTI	FIN	44:01		X	1986	CARDINGTON
ANDRE, THEDO	NED	44:01		X	1986	CARDINGTON
KOPECKY, ERNIE	USA	43:42	X		1963	SANTA ANA
ROBBINS, HERB	USA	43:39		X	1995	SANTA ANA
ORSOVAI, DEZSO	HUN	43:37		X	1986	CARDINGTON
KUJAWA, SYLWESTER	POL	43:35		X	1992	WROCLAW
MANGALEA, CORNELIU	ROM	43:30		X	1996	MOSCOW, IDAHO
CUMMINGS, FRANK	USA	43:28	X		1963	SANTA ANA
REE, ANDRAS	HUN	43:27		X	1992	DEBRECEN
ATWOOD, BILL	USA	43:17	X		1963	SANTA ANA
ENOMOTO, HIDEYO	JPN	43:02		X	1997	MATUMOTO CITY
THOMAS, MIKE	CAN	43:01		X	1996	MOSCOW, IDAHO
PLOTZKE, RON	USA	42:53	X		1969	LAKEHURST
FOSTER, JOE	USA	42:44		X	1987	SANTA ANA
SIEBENMANN, DIETER	SWI	42:33		X	1986	CARDINGTON
CAILLIAU, LARRY	USA	42:29		X	1985	AKRON
DOMINA, DAN	USA	42:25		X	1979	AKRON
CANNIZZO, SAL	USA	42:20		X	1983	LAKEHURST
PYMM, DAVE	UK	42:03		X	1986	CARDINGTON
ROMAK, BUD	USA	42:01	X		1965	MOFFETT NAS
OBARSKI, DICK	USA	41:30		X	1981	AKRON
FINCH, TOM	USA	41:27	X		1963	SANTA ANA
CHAMPINE, BOB	USA	41:23	X		1963	SANTA ANA
RODEMSKY, ERV	USA	41:23		X	1979	AKRON
STOLL, ED	USA	41:21	X		1963	SANTA ANA
HOFFMAN, EARL	USA	41:13		X	1987	SANTA ANA
MATHER, CLARENCE	USA	40:54		X	1974	SANTA ANA
GANSER, RON	USA	40:53	X		1996	AKRON
TIPPER, JOHN	UK	40:47		X	1996	MOSCOW, IDAHO
DRAPER, RON	UK	40:44	X		1962	CARDINGTON
POPA, AUREL	ROM	40:42		X	1996	MOSCOW, IDAHO
BILGRI, JOE	USA	40:37	X		1965	SANTA ANA
NONAKA, SIGEYOSI	JPN	40:36		X	1978	CARDINGTON
STEVENS, DARRYL	USA	40:35		X	1986	SANTA ANA
SHEPHERD, JESSE	USA	40:33		X	1995	AKRON
BAILEY, BOB	UK	40:25		X	1987	CARDINGTON
KIHARA, KAZUMASA	JPN	40:21		X	1997	MATUMOTO CITY
LOTZ, RAINER	GER	40:20		X	1996	MOSCOW, IDAHO
GITLOW, LEW	USA	40:15		X	1987	SANTA ANA
MOSKALEV, VASILI	UKR	40:15		X	1996	MOSCOW, IDAHO
KALINA, JIRI	CZE	40:11		X	1975	CARDINGTON
RODENBURG, OTTO	NED	40:11		X	1986	CARDINGTON
TRIOLO, JOHN	USA	40:06	X		1974	LAKEHURST
MZIK, LARRY	USA	40:01		X	1995	AKRON

*CLASS 1 – Over 65 cm CLASS 2 – FAI 65 cm – 1 gram

Official and unofficial flights included (best effort only, by individual, by class is shown).

For additions, corrections, etc. send details to:

BOB GIBBS 22870 Springmist Drive, Moreno Valley, CA 92557 USA