

Indoor News



Issue 21 February 1993

EDITORIAL

First of all I have to apologize for the very poor printing quality of the photographs in the last issue. I took too many copying steps and the general printing quality was down a bit too. I have tried to do better this time. Hope the results are acceptable.

Indoor News continues to grow, there are about 110 subscribers now. Your support has been great, in particular from the Brits and Australians, not to mention many others. I had hoped to make Indoor News more attractive to the East European indoor flyers by making it partly German, but this did not work. So Indoor News will be english only from now on. Also note the slight change in the heading. Several people called this magazine "News Indoor", but "Indoor News" is the correct name.

As you have seen I have access to a professional CAD system to make drawings. So don't hesitate to send your sketches, I can make a nice plan from it.

There is a new way of paying your subcription, which might be of interest to European readers. 14 European countries have set up a network, called Eurogiro, through which payment from one giro account to another can be made. Transfer of the money takes a max. of 4 days. Handling charges for the payer are ±NLG 9,50 and NLG 6,50 for the recipient of the money. The latter charge will be charged to the payer when you state "our cost" on the form. Please do this when you pay to Indoor News. Your Postal Bank or Girobank can supply further details. Paying by Eurocheque or with banknotes of course stays the cheapest way to pay your subs..

DIARY

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

19-20 June Orleans France — 11th Orleans International. F1D, F1D-Beginner, EZB. J. Delcroix, 7 Rue de Foncemagne, 45000 Orleans, France, tel 33 3863 4957.

8-11 July Brno — European Indoor Championships F1D + Open Indoor and Scale International. J. Kalina, Tasovska 365, 155 00 Praha 5, Czech Republic. More details elsewhere.

26-29 August Liège Belgium — 16th International Indoor. All classes. F. van Hauweart, Grand Place 1, Bte 52, 4400 Flémalle, Belgium.
(Not on 27-30 August as announced in Free Flight News!)

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

25-26 Sept Slanic Pradova Romania — Slanic Pradova Cup, F1D. Federatia Romana de Modelism, Str Vasile Conta 16 Sect 2, 70139 Bucarest, Rumania. Tel. 40 131 20160, fax 40 131 20161

1993 F1D Indoor European Championships + Open Indoor and Scale International

These Championships will take place in Hall "B" of the Brno Trade Fair from July 8-11th. Brno is situated 200km east of Prague. Hall "B" has a flat ceiling and is approx. 20,5 m high, see drawing and pictures.
The competition will include both a regular Senior Champs and also a Junior Champs, each for a three man team.
Time Schedule:
July 8 - arrival, registration, practice, opening
July 9 - 3 competition flights F1D
July 10 - 3 competition flights F1D, banquet
July 11 - reserve day, Open International Contest

COLOPHON

Indoor News is published at least three times a year and covers all types of indoor models, from peanuts to microfilm. Texts can be sent in Dutch, English, German and French (I can read the latter two, but not write them). Please type your texts on 12,5 cm width. Texts can be sent on floppy disk (3½ or 5¼) in Wordperfect or ASCII format. I can make tne drawings, if you are no draftsman. I prefer payment of subscriptions per six issues. Paying by Eurocheque, Postal Money Order or sending bank notes is free of handling charges to the recipient. Please bear the handling charges yourselves when paying by Eurogiro or with foreign cheques.

The Eurogiro account number is 4406860.

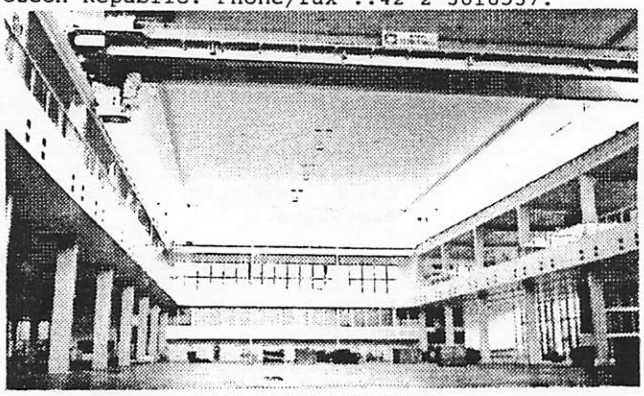
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Subscription: (per 6 issues)
Holland NLG 20,-
Europe NLG 30,-
Airmail USD 20,-

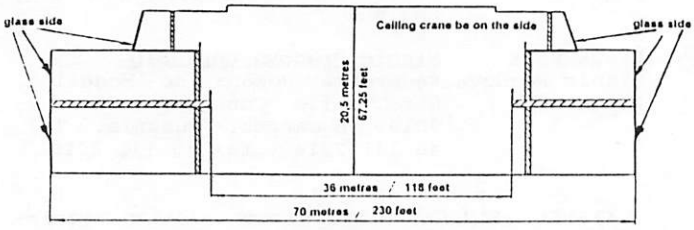
Accommodation will be
- in a new hotel 3 min. walk from the hall. Rates: Room single USD 73.00/double USD 92.00 or Apartment single USD 117.00/double USD 146.00, or
- in a student hotel 15 min. walk from the hall, rate USD 32.00 for double as well as single room.
Entry fee for competitors (seniors, juniors and team manager) USD 200.00, supporters USD 50.00.

The Open International Indoor Contest **Bohemia Cup 93** will take place on July 11th, also in Hall "B".
Time Schedule:
8.00-12.00 - EZB, LRS, Novice PP, Holy
12.00-14.00 - CO_2/El. Scale, Rubber Scale
14.00-18.00 - Peanut, Pistachio, No-Cal, IPRO CUP/Czech Scale (IPRO building planes serie 150 - till 1950)
Accommodation as above. Entry fee per person and per class USD 20.00, each add. event USD 5.00.

For more information (incl. contest rules, IPRO building plans-serie 150) please ask Jiri Kalina, Tasovska 365, 155 00 Praha 5, Czech Republic. Phone/fax ..42 2 3016537.



Hall "B" - BRNO Trade Fair grounds



Comments re. F1D, EZB, F1D-Beginner

The CIAM Free Flight Subcommittee has made the following rules change proposal for the 1993 CIAM Plenary Meeting:

F1L (EZB) proposal. Change minimum weight to 1 gram.

Reason. This rationalisation of the weight to a round figure from the current 1.2 g has been suggested by EZB flyers as a final convergence to EZB rules which will represent an acceptable compromise between the different national rules of those countries which fly the class nationally (some countries with and some without a minimum weight).

Another proposal from the FFSC is to accept a draft of an organisers guide for indoor competitions as an official FAI document.

From Boyd Felstead (AUS):

"I think we should drop the weight rule in both categories forthwith.

After 20 years, (1972 - 1992) the 1 gram F1D weight rule has outlived its usefulness. Introduced after the 1970 World Championships in part to curb flights over 30 minutes, what have we now under the weight rule? -- the present F1D record stands at 49 minutes!

There is now little scope for any variety in design from the big chord, long model -- while big boxes are needed for transport. The unbraced F1D and consequent smaller boxes is a step in the right direction, but if the weight rule was dropped we could see smaller chord wings again and smaller boxes for easier transport, as a change from the big chord models they could be flown against if still preferred. I would advocate that the 65 cm maximum wing span be retained, that being the only restriction.

For a different reason, I would abolish a weight rule for EZB. The U.S.A. (A.M.A.) seemingly want to retain a no weight rule. U.K. seem to still have a 1.2 gram weight rule, but allow microfilm covering. I don't know what the rules are in Europe. Is anyone yet flying the provisional FAI F1L 1.2 gram class? In Australia, we have had different rules in each state. If we had no weight rule we could more easily establish a standard world-wide set of rules.

No doubt there would be a greater participation in EZB if microfilm covering was still not permitted. Given a standard set of rules we could then consider EZB becoming a World Championship event."

From Thomas Vallee (USA):

"I would like to make an "editorial" comment on F1D rules. The present 1 gram weight rule does not achieve the goals which led to it's adoption. Clearly, it was foolish to adopt weight rules, without limiting the size of the model in other ways than span alone.

The average wing loading of competitive 1 gram weight rule models is lower than the pre weight rule models. The models are larger and more difficult to transport. I could support either one of two possible rules changes.

a. Drop the minimum weight and restrict model structure only by span, as advocated by Boyd Felstead. This has the virtue of simplicity and would allow more originality in design.

b. If we must have a weight rule:
1. Define F1D as a Monoplane (most important).
2. Increase minimum weight to 1.2 grams.
3. Limit size overall - maximum chord, model length, etc. as well as span. Limits could be set to obsolete few existing models.

Of the two approaches, I would prefer dropping the weight rule as advocated by Felstead, for its simplicity.

Mere increases of weight limits, would severely aggravate existing problems with weight rule models. The models would merely become larger. That is, longer with wider wing chords.

If you just add weight, after time, you reach a point where F1D BIPLANES become competitive and maybe have an advantage. If we ever reach that point we would be forced to adopt more rational and reasonable rules!"

From Kai Halsas (FIN):

I feel that the F1L (EZB) is not a plane for beginners or juniors. The quality of wood and the skill of the builder must be quite close to what is demanded when building an

F1D. My proposal is that F1D-B should be flown in all European countries, including England.

I have compiled tables, which show the main specifications for the Indoor Classes which we have been discussing. I have the following comments in reference to these tables:

1. Boron and exotic materials in general are only forbidden for EZB and LRS.
2. Fancy gadgets eg. vari-pitch propellers, are forbidden for Lim P-P, EZB and LRS.
3. Only EZB and Lim P-P must have solid wood fuselages.
4. Is propeller construction really free for F1D-B, Lim P-P and P-P? I feel that it should be wood only.

Note from TA: these rules indeed do not prescribe solid wood construction. Wood constructions can be highly complex, by the way: see article by Earl Hoffman in "Winning Indoor Designs". There is a way around everything.

(As a side note Kai states that he finds covering with microfilm easier than with the thin mylar covering materials. He asks whether I could persuade somebody to write a detailed (modern) article about F1D propeller (fixed pitch) construction. Who of the experts will do us the favour?!)

From Thomas Merkt (D):

In the latest "Thermiksense" there was a statement that a German Junior Team would be sent to the Eurochamps only when F1D-Beginner would be flown. A bit puzzling as F1D-Beginner will not be flown. Here are some comments from Thomas Merkt (D):

"Only 2 Juniors competed in the German F1D Championships last year and they had to be supported quite excessively by the Seniors. E.g. with steering, choice of rubber and with building. I suppose that the DAeC is only willing to send a self-supporting team and we have this in F1D-Beginner only. As far as I know no CIAM proposals in this sense have been forwarded by the DAeC.

We already discussed in Flemalle the question whether F1D-Beginner or EZB should be flown at Junior World or Eurochamps. We obviously agreed that F1D is far too difficult for most Juniors. There are exceptions, but all are near 18 years old, that is: almost grown-up. I would support F1D-Beginner, as I believe that such a model will be much easier to build and fly, compared to Easy Bee. An F1D-Beginner is a much bigger model, that has sturdier spars and ribs. There too is the weight difference between 3g and 1,2g. Even a good indoor flyer will have difficulty to achieve this 1,2g. Such a model is very vulnerable and will be hard to handle by a beginner, provided he could have built one.

What is also important in my view is that the performance gap between a beginner and an "expert" will be larger for EZB. A good model will fly ca. 12 min., a beginners model only 4 min.. That is three times as long. Whereas a bad F1D-Beginner can do 6 min. when it is well-trimmed, but the top performances will be just 12 min..

In my view a World or Eurochamps for Juniors should be well appropriate for a beginner, as a Junior will always be a beginner."

From Ebele Schouwstra (NL):

By this I want to adhere to Thedo's point of view that F1D-Beginner is more appropriate

BUILT-UP FUSELAGE MODELS

	F4D INDOOR SCALE	F4F PEANUT	SAINTE-FORMUL.
MAX SPAN mm		330	
MAX PROJ. SPAN mm			
MAX WING CHORD MONO PLANE mm			80
MAX WING CHORD BI PLANE mm			60+40
MAX WING LOADING g/dm2	15		
MAX FUSEL LENGHT mm		230	
MAX FUSEL CROSS SECTION mm			30X40X50
MIN WINDSHIELD AREA cm2			2
MAX MODELWEIGHT g			2 (3)
MAX FLYING WEIGHT g	150		
LANDING GEAR			TWO LEGS WHEEL Ø 18
MAX PROP. Ø mm			150
MAX PROP. BLADE WIDTH mm			25
COVERING			ALL EXEPT MICROFILM

STICK/TUBE FUSELAGE MODELS

	F1D-B	Lim P-P	P-P	F1D	F1L (EZB)	LRS
MAX SPAN mm	460			650		
MAX PROJ SPAN mm		457.2	457.2		457.2	177.8
MAX WING CHORD mm		127			76.2	63.5
MAX STAB DIM mm		101.6 x 304.8				
MAX STAB % OF WING PROJECTED AREA					50	50
MAX PROP. Ø mm		304.8				177.8
MAX LENGHT. mm		508	508			254
MAX HOOK DIST. mm		254	254			127
MAX MODEL WEIGHT g	3.0	3.1	3.1	1.0	1.2	0.425
MAX RUBBER WEIGHT g	1.5					
TYPE	Monopl. only	Monopl. only			Monopl. only	Monopl. only
PROP. CONSTR.					Wood (Plastic)	Wood
MOTORST. CONSTR.		Solid			Solid	
COVERING	No microf.				No microf.	No microf.
BRACING					Wood only	Wood only
EXOTIC MATERIALS (BORON ETC.)					Not allowed	Not allowed
FANCY GADGETS		Not allowed			Not allowed	Not allowed

for youngsters than EZB. I agree with the following lines where Thedo states:
. he wants an event that stimulates and promotes indoor flying by juniors,
. it is not his main purpose to make expert flyers out of them, but if they do it is all the more fun,
. he will be satisfied when indoor flying will become their hobby,
. he wants World Indoor Games; emphasis on 'games'.

In the following lines some thoughts why I do support his ideas. At first I have to admit that I do not have any experience with EZB, so I cannot compare, but I am reasonably experienced on simple F1D-Beginner type of models. I will draw from my experience at the club of 'Kottenpark College'. In this club F1D Beginner and Sainte Formule are main parts of the club's activity. Most youngsters enter when they are 11 or 12 years old. At this age it is no problem to let them build Dieter Siebenmann's Le Moustique (F1D Beginner) with guaranteed success: they fly straight from the building board. This model is not critical at all. The building time is short enough for the attention span of any 11 year old child. As an average for this age the building time of a model must not exceed this amount of time. At this age choices are made quite arbitrarily. Expressions like "This is boring, or that is 'swell'" are heard many times. Choices are also determined by what others do. Choices can also change quickly when they want to investigate other types of models. And -what I think- is looked for by most of them is contact with others. From age 14 on the choices are made more deliberately.

I think it is not necessary to have a World Champs Event. Events on smaller scale will also suffice. If it is wanted to organise some events for juniors these must not be too exacting and emphasis must be on playing and on fun.

(Note from TA: the weekly building and flying sessions at his school always attract 30-40 kids (age 11-18)! Apart from indoor models they build free flight and electro control line models.)

From Jørgen Korsgaard (DK):

Thank you very much for the latest IN, I was happy to learn that you have already doubled the number of subscribers. Well done!

I am sorry to say that indoor flying in Denmark is sleeping for the time being though there has been an attempt to run two contests this year. Only very few attended, and we do not know the reason why. In the mid-eighties we had a lot of fliers including a lot of youngsters but they did not stay with it. Hugo Ernst is still doing some indoor, but Frank Dahlin and I have concentrated on outdoor, mostly Wakefield. Still my workroom is still filled with F1D boxes and equipment and the closet is occupied of microfilm sheets!

Well, generally FREE FLIGHT activities in Denmark have decreased, we are now only about 60 members in the FF Society (FF-Unionen) with practically very few juniors, and we do not see them on the flying sites. There is a "hard core" of about ten people who regularly compete nationally and at the Free Flight World Cup contests abroad. To these people Free Flight is a way of life!

Radio Control attracts about 3000 (!) in Denmark but less than 100 of these compete seriously according to the list of results I see in the national magazine MODELFLYVE-NYT. The rest of the gang "just fly for FUN".

I am wondering if we FF people are competing ourselves to death forgetting all about the FUN which also is implicit in our hobby and sport - indoor and outdoor.

Boyd Felstead of Australia suggested the 1.2 gram EZB rules changed to one gram. I do not think this will make any difference as does the "builder of the model" rule being valid in indoor or not.

These days young people want action, quick changes of activities, instant-satisfaction and they want INTERTAINMENT! ... and only very few feel themselves attracted to our activities. (why only boys in the white catagory??).

Perhaps one day in the future when they have got too much TV, videos and computer games they will return to REAL experiences with tools, materials and the game in the air in order to get a touch of real life. I do not know .. but we must be ready to catch them!

From the editor:

"These have been the only comments on F1D and F1L rules I received so far. The Easy Bee people have been totally silent, even on the issue of a possible World Championships. Is the class alive or aren't the flyers?!

Do at least make your views known to your national CIAM delegate, if you want to have any influence on the decisions that will be made at the Plenary Meeting in March.

Some info about Easy Bee in Holland. The class was introduced acc. to the U.S. rules in 1975 and reached a peak in popularity around 1978. This then began to drop off rapidly, maybe because one particular person began winning every competition or for other reasons. Around 1983 the 1.2 gram and 50% stab limits were adopted, but this did not have any effect on the number of flyers. By now there are only two or three people that have an Easy Bee model, but they barely fly it. For the time being we dropped the National Championship in Easy Bee. The rules have been brought into compliance with the F1L rules, waiting and hoping for better times.

On the contrary F1D-Beginner has become highly popular, particularly since we dropped Penny Plane in favour of F1D-Beginner and introduced the Moustique."

Living Room Stick Rules

Some minor changes have been made to the Living Room Stick rules. These are:
- Max. propeller diameter to be 7" (177.8 mm)
- No boron, VP props, torque burners or other high-tech items to be used, as tis not to the spirit of the event.

1st Dutch-German CO_2-Meeting

report by Gé Brouwer (NL)

On the 14th Novenber 1992 the first Dutch-German CO_2-meeting was held in Venlo (NL). Speakers were Klaus Jörg Hammerschmidt from Aachen (D) and Wijnand de Joode from Venlo (NL). Official language was a mixture of German and Dutch and so didn't exist. About 35 participants joined the meeting coming mainly from the Netherlands but also from Belgium and Germany. As usual in this province the meeting started somewhat later then announced, but also as usual in a fine sociable atmosphere under the smell of fresh made coffee.

Klaus Jörg must be an enthusiastic teacher, because he delivered a clear and understandable lecture in his own language. Only a few questions were left for the auditors. In brief he discussed the practical

topics of the principle of operation, problems and their solutions, physical properties of CO_2 and optimization of filling and adjusting CO_2-motors. Overhead sheets, slides and demonstrations with normal CO_2-motors and filling apparatus supported his lecture. It is impossible to deal with all subjects in a few words, but his book 'CO_2-Motoren und ihr Einsatz' (Neckar-Verlag, Villingen-Schwenningen, Germany, ISBN 3-7883-0632-7) gives a complete overview about this subject including history, different motors, tips and tricks and all the things you always wanted to know about CO_2. It is essential literature.

The second speaker was Wijnand. He showed motors of different makes, kits and some models. His lecture reached a climax as he showed his simple paper plane with a 3 mm³ Gasparin motor. Just a paper plane as we all learned to fold, but now of air mail paper and invisibly strengthened by pieces of balsa wood.

After the two lectures we strengthened our inner man with buns, coffee and other drinks like delicious German white wine. More important for the participants was the chance of looking at all motors, filling apparatus, model kits and literature presented during this meeting and to buy them. They also used the opportunity to discuss questions with the two organizers and with other participants, having already some experience with CO_2-motors. Regarding the success of this meeting a continuation may be expected. A suggestion is made to combine a meeting with a possibility to fly the models outdoors. Readers who are interested are requested to contact Wijnand (NL 077-511795) or Klaus Jörg (D 0241-48531).

BMFA Education Program

When looking for good beginners models I read in Aeromodeller about the BMFA Education Progamme. The man behind it is Mike Colling and I asked him for more detailed information. Indoor models prove to be an ideal introduction to aeromodelling. The Delta Dart does not need an introduction. The Gymminnie Cricket was built by one of the boys of Ebele Schouwstra's school club and he flew it in Liège with great success. It is the model on the group photo in IN 20 (lower left corner). With somewhat too thick rubber it climbed like a Wakefield! Now over to Mike:

The information that you ask for on the BMFA Education Programme is as follows: - The kits produced for the programme are made at a no profit basis as schools in the U.K. have not got a lot of money. There are at present three kits in the range:
AERO-GLIDE.....This simple card and balsa glider has a wing span of 20 cm and is designed specifically to be made without the use of a modelling knife. It is designed to demonstrate the basic control surfaces of an aircraft. This model is suitable for an 8 year old to build under supervision.
BMFA DART.....This is a simple rubber powered aircraft from an American design. Over One Million have been made in the U.S.A. and it is claimed to have 98% success rate. This model is suitable for a 9 year old to build under supervision. A good follow on from AERO-GLIDE.
GYMMINNIE CRICKET..This is a simple P15 class rubber powered model with a flat wing section. This is a good follow on model to the BMFA DART and it is recommended to fly indoors in a gymnasium or sports hall. It can also fly outside on a calm, dry day.

In 2 or 3 months time I hope to introduce kit number 4, this will be the BMFA FROG, a Federation ROG class model that will have sliced ribs, undercarriage and a high aspect ratio wing.

The above kits are supplied in the U.K. from Mike Colling, 403 Mossy Lea Road, Wrightington, Wigan, Lancs. WN6 9SB, England, at the following rates:
AERO-GLIDE 80p each, 60p each for quantities over ten or in bulk form of 35 kits for £20 (including Post and Packing).
BMFA DART £1.50p each, £1.20p each for quantities over ten or in bulk form of 35 kits for £40 (including Post and Packing).
GYMMINNIE CRICKET £1.80p each, £1.50p each for quantities over ten.
The BMFA FROG has not been costed yet but I hope it will be about £2.00p each.

The Teachers Guide and a sample of the AERO-GLIDE and BMFA DART kit is available for £3.00 (including Post and Packing). Post and Packing, where not otherwise stated, is 50p minimum or 10% of order. Cheques to be made payable to W.M. Colling.

Cost of selling the kits outside the U.K. may be prohibitive and there is also the language problem. What can be done is to help people set up their own kit making set. I can help with sample kits (at the above prices) and help in sourcing components. As well as information that we generate in this country.

The Teachers Guide and kits are used in schools and fit well with the National Curriculum that they now have to cover. Scout groups and Air Cadets are starting to use them in their activities. They are sold at exhibitions (over 1000 at the last Model Engineers Exhibition, in London).

We have a "Helpline" where schools and organisations can phone the BMFA office, who passes the details on to the appointed Area Co-ordinator who then puts a local modeller in contact with the organisation requiring the help. This part of the programme is still being set up. To give encouragement to BMFA Members to help with this programme I produce a regular column in the BMFA newspaper.

It is a long term programme and at present it is too soon to see major increases but there are a number of school model clubs formed and some school halls have been made available to indoor flying that were not available before. The programme is good PR.

There are a small number of critics within the BMFA but on the whole the programme has been looked at in a good light. It is still growing but as I have to work full time for a living progress is slow and funding is small.

I hope the above is some help. If you require any other information you can always phone me (0257 452624).

Thermals for ever even Indoors,

Mike Colling

Tre Kronor and Antoinette

I told you something about the beginners models as marketed by the Swedish firm Ackus. The Tre Kronor and Antoinette kits have now been built by juniors at my club. Both are attractive, sturdy, Peanut-size models. See Ackus advertise ment elsewhere.

The Tre Kronor, a Farman-like design by Bill Hannan, proved to be very easy to build. But rigging up the biplane wing was too difficult and some help was needed here. But that is a general problem as very few beginners can build an indoor model without help, even from a kit. The model flew very well. It needed trim tabs on tail surfaces and wing tips, which made it very well adjustable. The model flew somewhat skewed and slipping, as it does not have dihedral. The wing is fixed with tape and can thus be moved when the CG needs to be changed. Only the rudder trim tab is mentioned in the instructions.

The boy who built the Antoinette, also a Hannan design, almost managed to finish it in one evening. Very quick. Help was barely nee-

ded. The cross-wise ribs make for a very warp-free wing, an essential feature of a beginners model. But the wing is glued to the fuselage. The possibility of adding trim tabs is not mentioned in the instructions. The model was quite a bit over-elevated, when we let it fly. I would suggest to increase tailplane aspect ratio and to make some additions to the instructions (CG-indication, trim tabs).

What is generally lacking in almost any model kit is an advise on what would be a good choice for the next model to build. Also addresses of aeromodelling organisations, nearby clubs or individual flyers should be included in the kits. If this model is their first acquaintance with the hobby, it should be a success from the start and an encouragement to continue. Advise them to join a club!

HANGAR RAT

In one of his letters Boyd Felstead mentioned the success that the Australians are having with their Hangar Rat beginner models. Some years ago Max Starick started to produce kits of this model and this greatly boosted interest in indoor flying. Boyd talked Max into sending me a plan and further details. Here is Max's accompanying letter that tells the story.

Dear Thedo,

"I was speaking to Boyd Felstead from Sydney on the telephone last week and he said that he had received a letter from you asking for information about the "Hangar Rat" that we have been using to introduce people to indoor flying. About ten years ago I decided to organise indoor flying in South Australia. Up until then for quite a number of years indoor flying only happened at National Championships, so I decided this should change.

When we first started flying it was hand launch gliders, Peanut Scale and Easy Bee, but we didn't appear to gather in newcomers. They were interested in coming along to watch, but not in being part of the flying. The next thing was to find a way to encourage people to try some form of indoor flying and while talking to a friend he told me about a little stick model that he had built from Model Builder called the Hangar Rat. So I found it in my magazines and after looking at it decided that it had possibilities with a couple of small modifications. I built one with my ideas put into it and took it along to the next flying night and it flew quite well.

I copied some plans and handed them around to see what the response would be, but even though people were willing to accept the plans only very few models appeared at our flying nights. My next idea was to put together some kits containing all of the materials with all of the wire parts formed and sold at about the cost of the material. I knew it meant quite some effort and time but as I was retired I had quite a lot of time and I love aeromodelling and here was some way of putting something back into it. Since doing this indoor flying has gone from strength to strength. So far we haven't produced any world class F1D fliers but we have a lot of modellers who are trying this form of flying and quite a lot of new faces are trying modelling for the first time through Hangar Rats. So I hope that some of these people will go on to greater things.

Now something about the Hangar Rat. I am enclosing a plan and on it you will see lots of little notes and also the rules that I suggested. The original model flew with a plastic propeller, but I altered that to save some weight and to increase duration. This meant shifting the wing position and the incidence of the wing was altered for easier trimming. A good average weight for the model is around seven grams and at this weight times of two minutes plus are possible. When beginners build this model it doesn't matter how badly it has been done, it will fly, maybe not well but to a beginner seeing their creation flying for whatever time is great reward.

When we first started indoor flying here it was about three times a year mainly because hiring a venue with the number of people who were interested made it quite expensive. But as numbers increased we could fly more frequently. Until I would say for the last five years we have been holding monthly flying nights and the numbers have grown from five to six to between thirty and forty and sometimes more these days. The great thing is that we are seeing quite a lot of juniors taking part and this is happening because whole families are coming along to flying nights.

The venue that we use is a sports centre that has a double baskett-ball court that measures 36.5 x 33.2 meters and the ceiling height is 9 meters and quite smooth. We have one objection in the centre of the hall and that is a net that divides the two courts which is rolled up but still hangs down about half a meter. We still have ample room to fly on either side of the net. But some hang-ups do occur now and again if people do not take enough care where they release.

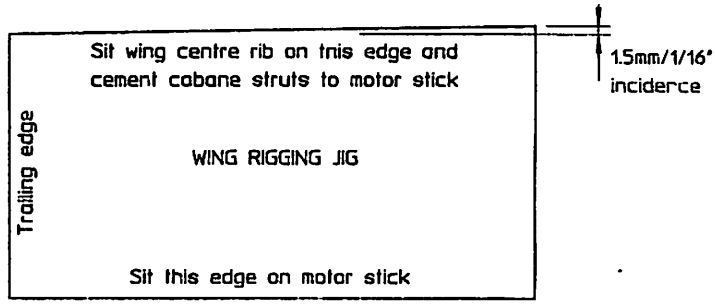
Now about the person who is writing to you. I started modelling in 1938 at the age of 15 which makes me an Old Timer. I still love Free Flight, especially rubber and sailplane. Most competitions that I fly in now are Old Timer and Vintage. Naturally indoor has been an interest of mine and I also fly Radio, only Old Timers and Sport. I flew my first radio model in 1951. Radio was another interest of mine, I worked for Telecom Australia before my retirement in 1986.

I intend sending you one of our Hangar Rat kits so that you can see how we entice newcomers to try what I call the gentle art of model flying. I hope this will tell you something of what we are doing and about the Hangar Rat."

The Hangar Rat Kit

The Hangar Rat kit was very well produced. Wood selection was good, though I would have choosen lighter wood for the wing ribs for easier cutting. All wood was colour coded and the colours were indicated on the plan. The small wire parts were all pre-bent. There were turned balsa wheels with glued-in bushings and even some clay for trimming was included. The building instructions are reprinted herewith. The instructions about covering should be more extensive. Inexperienced hands can ruin the job easily in this phase of construction.

The model has not been built yet, but it sure looks good. Max Starick produces the kits for local needs only, but if anyone anywhere would like to do the same in his country, you can write to him to share experiences. His address is: 57 Rellum Road, Greenacres, South Australia 5086.



RULES FOR COMPETITIONS

1. Model to be constructed as per plan. No mods.!
2. Rubber motor to be 36" length before tying into a loop.
3. Tissue covering only. No condenser paper, microfilm or superlight mylars.
4. Times of best two flights to count out of as many that can be flown in a given time. Usually 6 flights.
5. Model must R.O.G.

TRIMMING NOTES

1. Model flies best in R/H circles
2. Approx. 9mm/3/8" right rudder required
3. Weight nose & adjust thrust line to prevent stall & to obtain desired climb angle
4. Some right sidethrust may be required. Also downthrust.

Left hand wing shown. Be careful to build L/H and R/H panels.

Cement covering on wing and tail surfaces with "pental" or some similar office glue.

Pre-shrink tissue before covering.
Do not shrink tissue in any way after covering.

"Slack is beautiful"

Front strut position

0.8mm x 1.5mm 1/32"x1/16" ribs

Rear strut position

2.5mm x 2.5mm 3/32" sq. med. soft

1.5mm x 3mm 1/16"x 1/8" med. soft

1.5mm 1/16" rib

64mm dihedral each tip 2.5°

0.8mm 1/32"

1.5mm x 3mm 1/16"x1/8" med. soft

Cover fin on left side only

0°

Prop hub 3mmx 5mm/1/8"x3/16" hard balsa or hardwood. Cut in this manner.

13

25

3

5

Optional
Suggest adding rear lift strut to eliminate wing warping

Rear strut 1.5mm x 3mm 1/16"x 1/8" med. hard Placement optional

Pilot optional

Centre rib full depth

Wing ribs other than centre rib shown in dotted lines

C.G.

52

+1.5mm +1/16"

1.5mm x 3mm 1/16"x1/8" med. hard

Lift strut 1.5mm x 3mm med. hard 1/16"x 1/8"

Dihedral jig

Add weight to nose to trim

ø0.6mm/ø025"

ø0.6mm/ø025"

3mm x 9mm/1/8"x3/8" taper to 3mm x 6mm/1/8"x1/4"

Make sure that teflon thrust washers are put on prop shaft

Rubber motor to be 90 cm/36", length before tying into a loop. Recommended width 2.9mm/.115" for average weight model. Standard 2.5mm/3/32" can be tried for improved performance.

Enlarge 141%

1.5mm x 3mm 1/16"x1/8" med. soft

Prop blade 0.8mm 1/32"

Prop blade template

3mm x 0.8mm/1/8"x1/32" balsa strengthening strip on front of blade to prevent splitting

ALTERNATE NOSE BEARING
Slight downthrust

1.5mm/1/16" aluminium tubing

3mm x 10mm 1/8"x3/8" balsa Bind with thread

ø0.6mm/ø025"

ø25/ø1" wheels

News Indoor

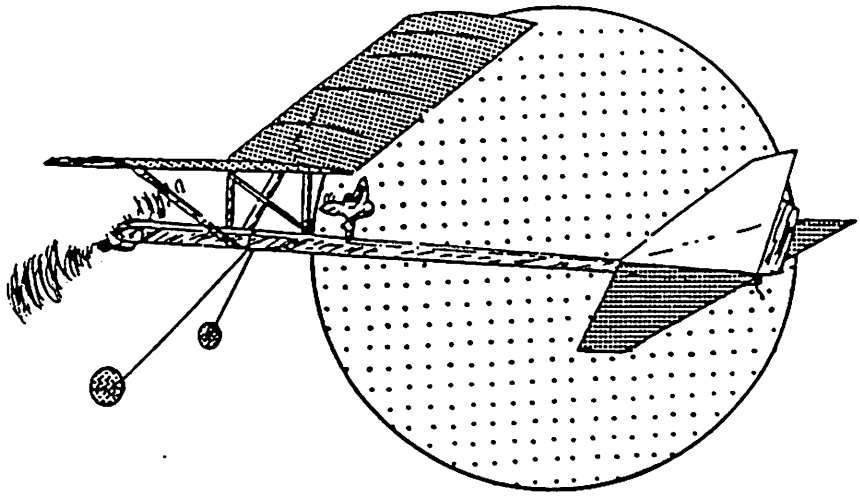
Plan originally from R/C Model Builder August 1979

HANGAR RAT

Designed by: H. Barr
Modified slightly by
M. Starick

THE HANGAR RAT





By HARRY BARR . . . A cute little rubber job that is easy to build and fly.

• "Hangar Rat" owes its existence to the "Sig Parasol," a simple, easy-to-fly, tissue-covered profile model. Having built one of these with a cambered wing, I proceeded to fly it every lunch hour in the hangar, where I worked, until it was so tattered it was retired to a place of honor above my bench. Needing another fun machine that could be built in a hurry, "Hangar Rat" evolved, using the same airfoil I had used on the Parasol.

It has been a success right from the first flight, with average flight times under a 20-foot ceiling of 50 sec., with a best flight to date of 1:08 and many flights over a minute. It is easy to adjust and build and will bring pleasure to both the beginner and the jaded R/C nut (like me). It brings back memories of simpler times when modeling was less complex and expensive.

If you are a beginner, follow the plans closely and you will be rewarded with a fun flying machine. If you're an old hand at the game you probably have your own ideas about a lighter airframe, better prop, etc. Regardless, have fun!

CONSTRUCTION

Let's start with the wing and get that miserable so-and-so out of the way. Using the side view of the fuselage, cut a template from 1/32 plywood of the rib profile. Reinforce the edges of this template with a Cyanoacrylate type glue to toughen them against knife knicks. Using this template, slice out ten ribs 3/32 deep from 1/20 sheet and two full-depth ribs from 1/16 sheet. Protect your drawings with Saran Wrap or something similar and pin the wing frame to your building board. Use the dihedral jig to set the root rib angle accurately and glue the root rib (the full-depth rib) in place. Add the gussets at the root and allow to dry thoroughly. Since the wing is bilaterally symmetrical, the same wing drawing can be used to build the second panel merely by moving the root rib to the opposite end.

Once both panels are framed up, gently sand the leading edge to a rounded contour and reglue all joints. Do *not* join the wing panels at this time! Set them aside for now.

The tail surfaces and cabane structure are built flat over the drawings using the time-honored method of pinning and gluing. The only point worth noting here is the method of joining the stabilizer leading edges. This is stronger than a butt joint. The 1/32 trim tab is cut out now, sanded, and set aside. Do not glue to the fin at this time. Lightly sand surfaces and check all glue joints.

The motor stick is a firm piece of 1/8 x 3/8 balsa. Pick a good straight piece and after cutting to length, taper the bottom (from front to rear) to 1/4 x 1/8. Sand to suit your personal tastes.

The wire parts are bent up from .025 music wire. Note that the tail skid and rear hook have a tang that pierces the motor stick approximately 1/8 of an inch. Bind the hook and skid neatly with cotton thread and cement securely. The landing gear is pressed over the motor stick in the proper position and it is also bound and glued in place. Slip a pair of 1-inch wheels in place over the axles and bend the axles upward to retain the wheels.

The wings and tail surfaces should now be covered. Use the lightest possible grade of tissue available, iron it flat, and attach with water-thinned white glue. Cover only the top of the wings and stabilizer and one side of the fin. Do not use any dope and do not shrink the tissue.

Now that the wings are covered, cement both butt ribs lightly and join, using clothespins as clamps until the glue dries. At this point, glue the cabane to the wing in its correct position. Ensure that it is perpendicular when the wing is level (equal dihedral under each tip). If such is not the case, apply your sanding block to the surfaces that contact the wing ribs until corrected. (Note: the cabane glues to the *side* of the root rib.)

Accurately assemble the tail group to the fuselage. It may be necessary to remove a small sliver of tissue from the stabilizer center rib in order to get a good bond between the fin and stabilizer. Add the trim tab at this time, with about 3/8 inch *right* offset. Tack-glue lightly to allow for adjustment. Cut "Mr. Rat" from foam of balsa, decorate, and glue in place.

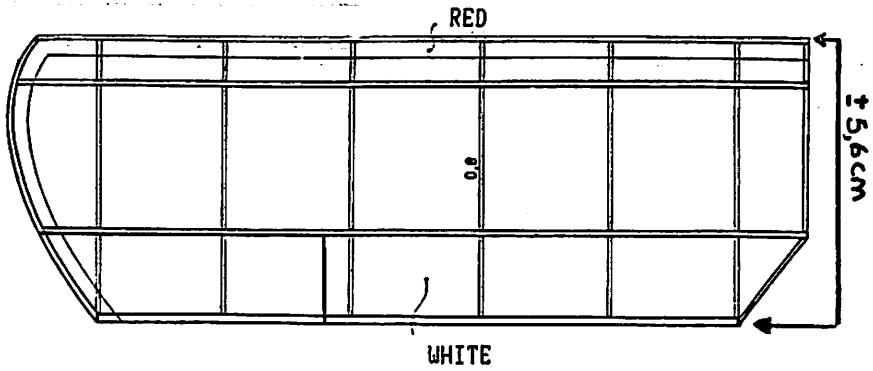
I used a 7-inch plastic prop, and the prop hanger was the one supplied with the Sig Parasol. This simply slides onto the stick. If you wish, a metal strap or aluminum tube type can be used instead, as long as it's securely bound and glued. Make sure that 3° to 4° of downthrust is built into the hanger, no matter what type you use. Use a drop of rubber lube on the prop shaft.

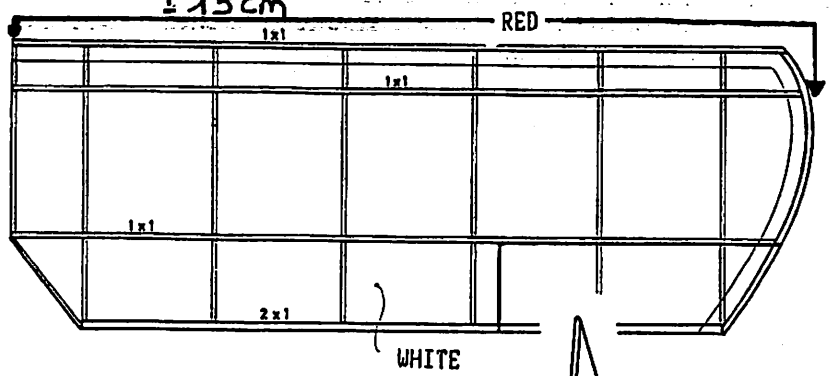
At this point, pin the cabane to the fuselage and by trial and error move it fore or aft until the "Rat" balance at the point shown. Because of the large stabilizer, the CG is further aft than might be expected. Once balanced, mark the correct position of the cabane and glue it in place. Ensure that the wing is properly levelled and the incidence angle is correct. Adjust to suit. You can now add the 1/16 x 1/8 lift struts. The small "X" on the wing drawing gives its location on the wing, and the side view of the fuselage indicates the struts' position. Although the struts' forward position is unorthodox, I placed it there for a reason. If the "Rat" contacts an obstruction, the strut takes the brunt of the collision and protects the leading edge of the wing. It's much easier to repair the strut than the wing.

If desired, initial glides can be done with the rubber motor left off. It has very little if any effect on the CG. Adjust the glide for a flat right turn of about 20 feet in diameter. My "Rat" flies best on a 17-inch single loop of flat 1/8-inch rubber. This is for the aforementioned 20-foot ceiling. No doubt you'll want to experiment to find the best prop/rubber combination for your own site. The wheels can be bent forward or back for final trim adjustments.

So now you can pack in the winds and have at 'er. I hope you enjoy the "Hangar Rat" . . . I still do! •

DOCUMENTATION : SEE FLYING AND GLIDER MANUAL 1931





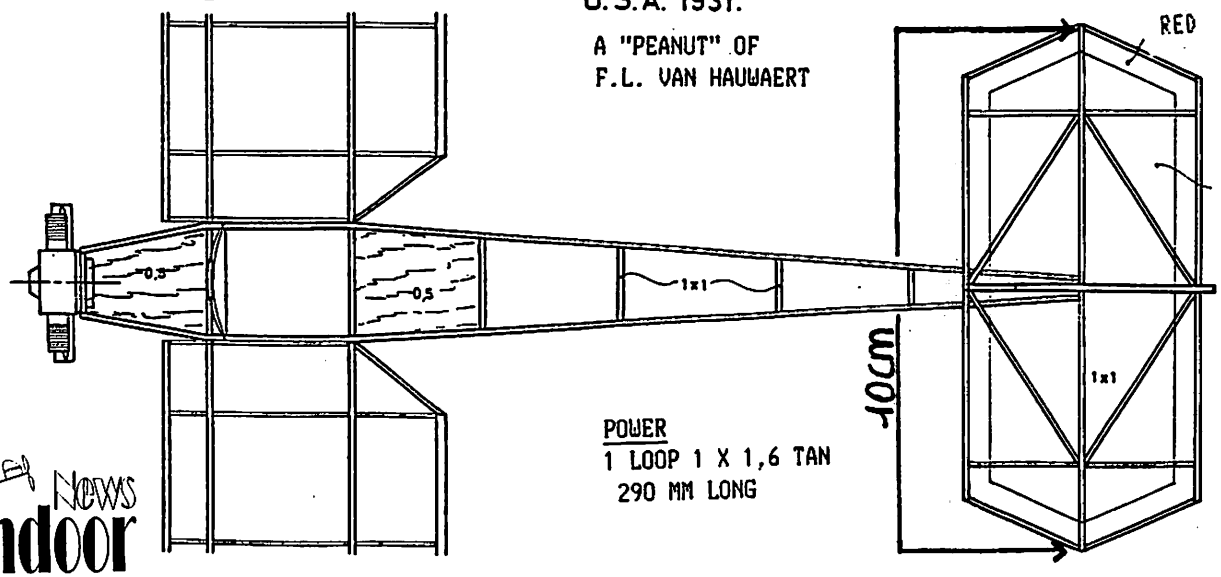
DIHEDRAL : 10 MM



LONGSTER

U.S.A. 1931.

A "PEANUT" OF F.L. VAN HAUWAERT

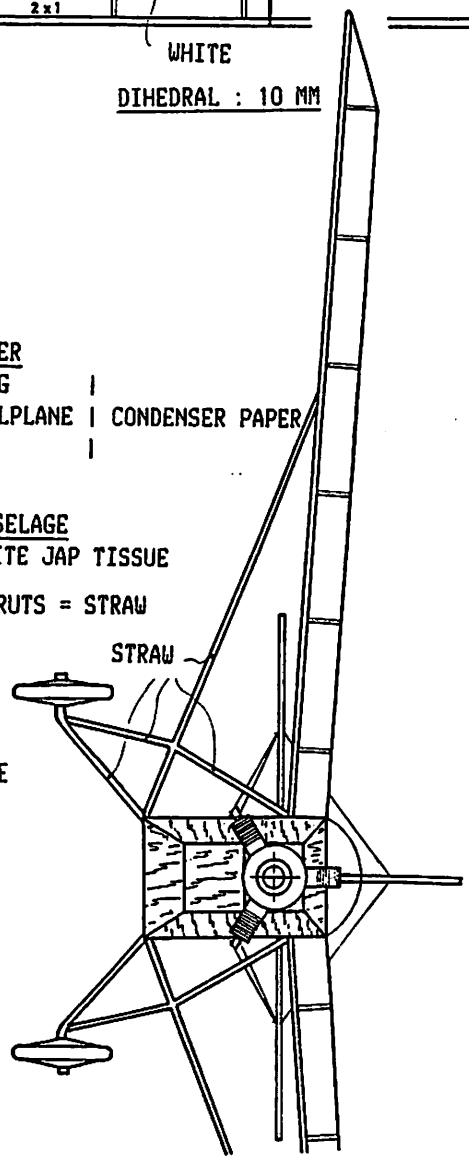


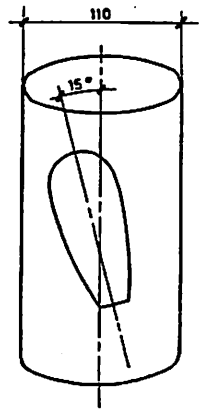
POWER
1 LOOP 1 X 1,6 TAN
290 MM LONG

COVER
WING
TAILPLANE | CONDENSER PAPER
FIN

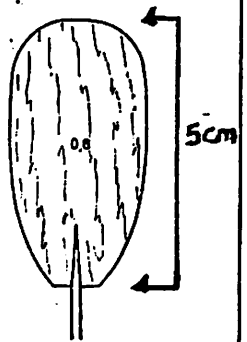
FUSELAGE
WHITE JAP TISSUE

STRUTS = STRAW





PROPELLER BLADE MOULDED ON CYLINDER Ø 110 MM



PROPELLER Ø 120

Indoor News

Dessiné par JOSÉ LESUISSE P.A.I 2-87

RUBBER TESTING

by Bernard Hunt (GB)

At the US Nats last year I broke all my favourite Pirelli in the hot conditions so I borrowed some Tan FAI from Jack McGillivray and as I liked it set out to acquire more and test it against Pirelli.

My old method of testing involved winding/unwinding F1D sized motors and noting turns-torque using an accurately calibrated torque meter. This works OK but it is time consuming and frustrating as you have to wind to the limit to get meaningful results and so blow many motors.

I read an article by the regular rubber tester, Fred Pearce, in the 1990 NFFS Symposium where he describes the stretch method for testing F1B sized motors. This involves breaking in by stretching a motor to a predetermined stress (load per cross section) and then testing by stretching to the limit and measuring the load-extension on relaxation to get the energy characteristics of the rubber. The assumption is that stretch testing and winding give comparable results.

I have adapted this method to indoor rubber sizes and found it to be very quick and reproducible and the energy figures were in pretty good agreement with the winding method.

To do stretch tests you need a kitchen scale, preferably an electronic one with a maximum load of 2 kg or more, a 2 kg weight (a lump of lead) with a smooth hook fitted and a wall with 2in (5cm) divisions marked up to 72in (180cm) high (ruler or tape measure better). Make up an 8in (20cm) loop of rubber (just like a motor) of 0.3 - 0.4 grammes but accurately weighed (W). Lube the rubber, zero the scale, place the 2 kg weight on the scale. This gives the zero load reading (F1). Now hook the rubber onto the weight and stretch the rubber upwards using a pencil or nail, the reading on the scale falls as you do so. Keep lifting the nail until the rubber is solid, note the scale and ruler reading, and hold the position for 2 min. (this breaks in the rubber). Lower the nail and relax the rubber and repeat the process for the 2nd break-in.

Now we are ready for the test proper. Repeat the stretch until the rubber is solid (or better to a calculated stress of 7000 psi = 5.5 kg/mm2 at 8 or so * stretch - remember the section is for 2 strand), don't hold the position but note the scale reading (F2) and ruler (L2), now relax the rubber in 2in (5cm) steps noting the scale readings (F) and the ruler readings (L), repeating this until the rubber is back to its original unstretched length (L1).

We can now plot a graph of load (F1-F) in grammes versus extension (L-L1) converted to centimeters. The area under this graph divided by the rubber weight (W) in grammes is the specific energy of the rubber.

My own preference is to calculate a normalised [ie standard weight (X) and maximum extension (Y)] version of the load versus extension plot which enables the shape of the curve and the 'cruise' load (= torque) to be seen regardless of the size of the piece of rubber tested or its hardness/softness. The load=torque at 50% of max stretch is probably the most useful figure.

Now for the important bit - the actual results. In the nice warm conditions (75 °F) of my tests, 1991 Tan FAI (ex Mike Woodhouse or direct from FAI) proved excellent - fully equal to my best Pirelli with an energy of 115,000-125,000 cm. 1989 Tan FAI was also equally good but two different identities of 1990 Tan were poor with energies of 93000-95000 cm. Tan FAI handles well in indoor use - it tends to break at the knot (so can be retied) although it is rather tricky to retie after lubing. I have had no problems with whiskering.

I have flown EZB, Penny Planes and F1D on hot days at Cardington with Tan FAI during Aug/Sept 1991 and I have to admit that I like the stuff a lot. I have done my best times ever in Novice Penny Plane (14'30) and US rules EZB (25'06 and an amazing 26'38) and won the F1D Team Trials to boot! I have only flown once on a cold day and Pirelli climbed better than Tan. It will be interesting to see how Tan copes with icy Wigan in February.

It looks like you need to use about 10% thicker and 10% shorter motors using Tan to get the same turns as Pirelli and you fly with much less back off.

Well there it is! I've tried to describe my stretch testing method for indoor rubber and I hope it is clear enough for people to try but if anyone has a problem write to me at 4 Ashfield Ave, Skelmanthorpe, HUDDERSFIELD HD8 9BW, UK.

Footnote:

Normalised load = (F1-F)*(L2-L1)/Y*X/W
Normalised extension = (L-L1)*Y/(L2-L1)
I use X = 1 gramme and Y = 100 inches (say 200 cm) for easy plotting.
Replace load by torque and extension by turns in these formulae to normalise torque/turns tests.

I always use a computer programme to calculate the normalised data and energy. A copy of the listing written for Sharp PC1450 or similar is shown below.

```
5000:"Z" REM "ENERGY CALC"
5010:CLEAR
5011:USING
5012:INPUT "LPRINT (Y/N)";P$
5015:INPUT "RUBBER TYPE=";T$
5018:INPUT "DATE= ";D$
5019:INPUT "TEMP=";TE
5020:E=0
5030:INPUT "WT=";W
5040:INPUT "MAX LENGTH=";L2
5050:INPUT "ORIG LENGTH=";L1
5060:INPUT "ORIG BAL READING=";F1
5061:IF P$<>"Y" THEN GOTO 5070
5062:LPRINT D$
5063:CURSOR 0: LPRINT "R TYP= ";T$
5064:LPRINT "WT= ";W;"*";L1;"IN T=";TE
5065:LPRINT "  LEN READ  NEXT  NFORCE"
5066:LPRINT "*10in  gm  *10in  gm"
5067:LPRINT
5070:INPUT "LENGTH=";L
5080:INPUT "BAL READING=";F
5081:USING "#####": GOTO 5085
5082:PRINT "NORM EXTEN=";(L-L1)*100/(L2-L1)
5084:PRINT "NORM FORCE=";(F1-F)*(L2-L1)/(100*W)
5085:IF P$<>"Y" THEN GOTO 5090
5086:LPRINT 10*L;F;10*(L-L1)*100/(L2-L1);"  ";(F1-F)*(L2-L1)/(100*W)
5090:IF L<L2 THEN LET E=E+(F1-F+X)*(Y-(L-L1))/2
5100:X=F1-F:Y=L-L1
5110:IF L-L1>0 THEN GOTO 5070
5115:IF P$<>"Y" THEN GOTO 5120
5116:USING "########": LPRINT "ENERGY=";E/W*2.54
5120:USING "#########"
5130:PRINT "ENERGY=";E/W*2.54
```

LOW CEILING FLYING

by Thedo André (NL)

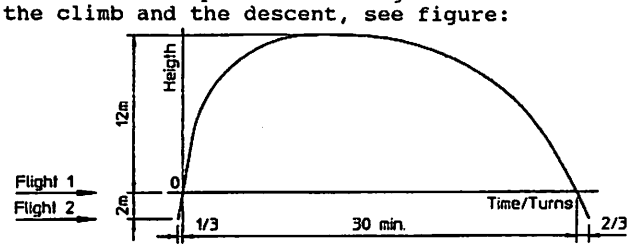
Anyone who tried it, will know: it is not easy to "tune" an indoor flight to just under the ceiling without touching it! But you have to be able to do it to achieve the longest duration that is possible. This can only be done when your motor has the correct thickness and has been wound to the correct number of turns and torque value. So you need to know precisely which size of rubber you need. The required accuracy is less than one-tenth of a millimeter per meter length! You have to be

able to wind a rubbermotor very evenly and with repeatable accuracy: you need practice! And you have to make proper use of your torque meter!

I will talk about this last item: the use of torquemeters. I see too many torquemeters that have a scale division that is too course. Let me explain this with an example. Particularly when there is no possibility of ceiling scrubbing, as in Liège, one has to be very careful in tuning the launch torque and turns. My first flight in Liège last year stayed about 1,5 m clear of the ceiling. On the second flight I increased the launch torque from 18 to 20. I am using a Polish torquemeter which has 100 divisions. A typical F1D motor can be wound to ±70 on this scale. Launch torque in a high ceiling is about 40 but in a low ceiling hall the torque seldomly exceeds 20. This second flight the model climbed to about 1 m above the lamps. I was very lucky to come away without damage. Just this (small) increase in launch torque was not the only reason why the model climbed to high. I managed to get about 50 extra turns in the motor, apparently because I wound that one more neatly and because the motor became more run-in. Add to this the slightly higher temperature (which increases the energy release of a rubber motor) and these 1,5 m is easily consumed.

Reg Boor recently wrote an excellent series of articles in Aeromodeller about the design and use of torquemeters. A handy feature of his torquemeters is an "unwinding push-button". But because of the required accuracy for low ceiling flying I would recommend its use only for general flying. It indeed eases unhooking, but how many turns are lost in the process? 10, 15 maybe? What has become your launch torque? A typical 30 min. F1D flight uses about 1400 turns and starts climbing at a rate of 6 m/min.. At a launch RPM of 50 the loss of 10 turns means the loss of 6x 10/50 = 1.2 meter in height, the difference between a successful flight and a too low one. On the next flight you might not loose as much turns and end up too high.

On this second flight in Liège I had about 50 extra turns. The climb phase of an indoor flight takes about 1/6 of the time, the cruise 3/6 and the descent 2/6. The 50 extra turns on this particular flight were added to the climb and the descent, see figure:



So 1/3 is added to the climb: 1/3 x 50 x 6/50 = 2 m height increase. Add to this the increased temperature: conclusion, I took too much risk!

With a little practice a motor can be unhooked without the loss of a single turn. The motor must have O-rings. Grip the motor directly near to the O-ring, pull the motor untill the ring gets in a comfortable position for unhooking, press your fingers together till you have the ring firmly between the tops of your fingers and unhook.

Besides the proper use of a torque meter, accurate low ceiling flying does require that you know all there is to know about your rubber and of each individual motor. The object is to reduce the many, many variables that affect an indoor flight to the barest minimum. There can be considerable differences between two successive wind-ups of the same motor. F.i. try massaging the rubber while winding and watch the torque drop! Good winding requires much patience and practice.

My torquemeter is not accurately calibrated, which is of course unscientific. I once tried to do it and estimated the unity to comply with gram-centimeters (0.001 Newton-meter). But as long as you use the same torquemeter for all your flights, you can make perfect flights without calibrating your meter.

INDOOR | ATMOSPHERIC | PROP | RUBBER | TUNING

By Ph Severy

DATE	CLASS	WEIGHT	TEMP°	HUMID°	PRESSURE	DIA ∅	PITCH	TYPE	WEIGHT	POWER	LOOP	TURNS	TORQUE	CEILING	FLY TIME	

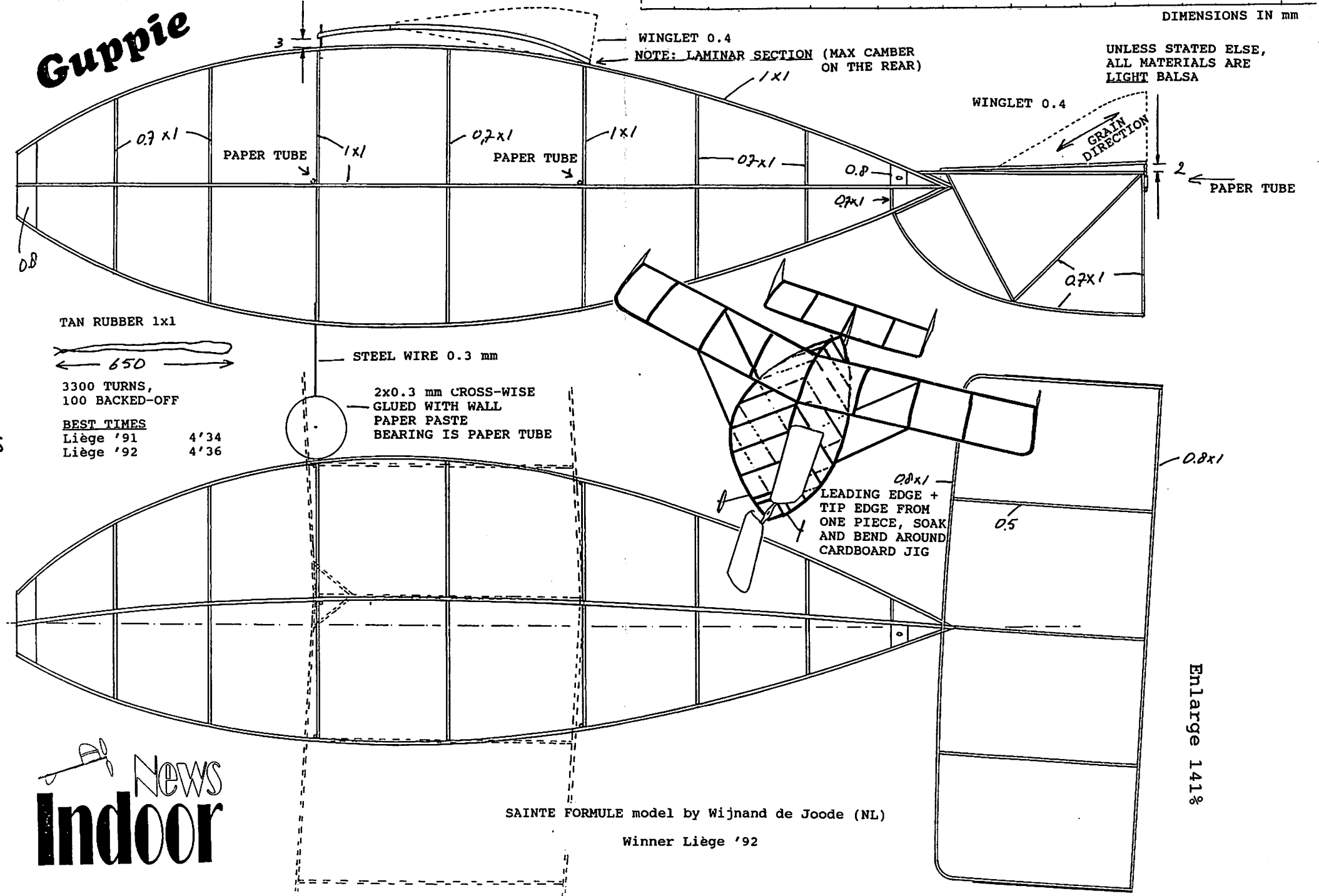
A contribution by Philippe Severy (Belgium)

DRAWN BY WIJNAND DE JOODE (NL), TO IDEA'S BY BENNO SABEL (G)

Guppie

200

DIMENSIONS IN mm



SAINTE FORMULE model by Wijnand de Joode (NL)

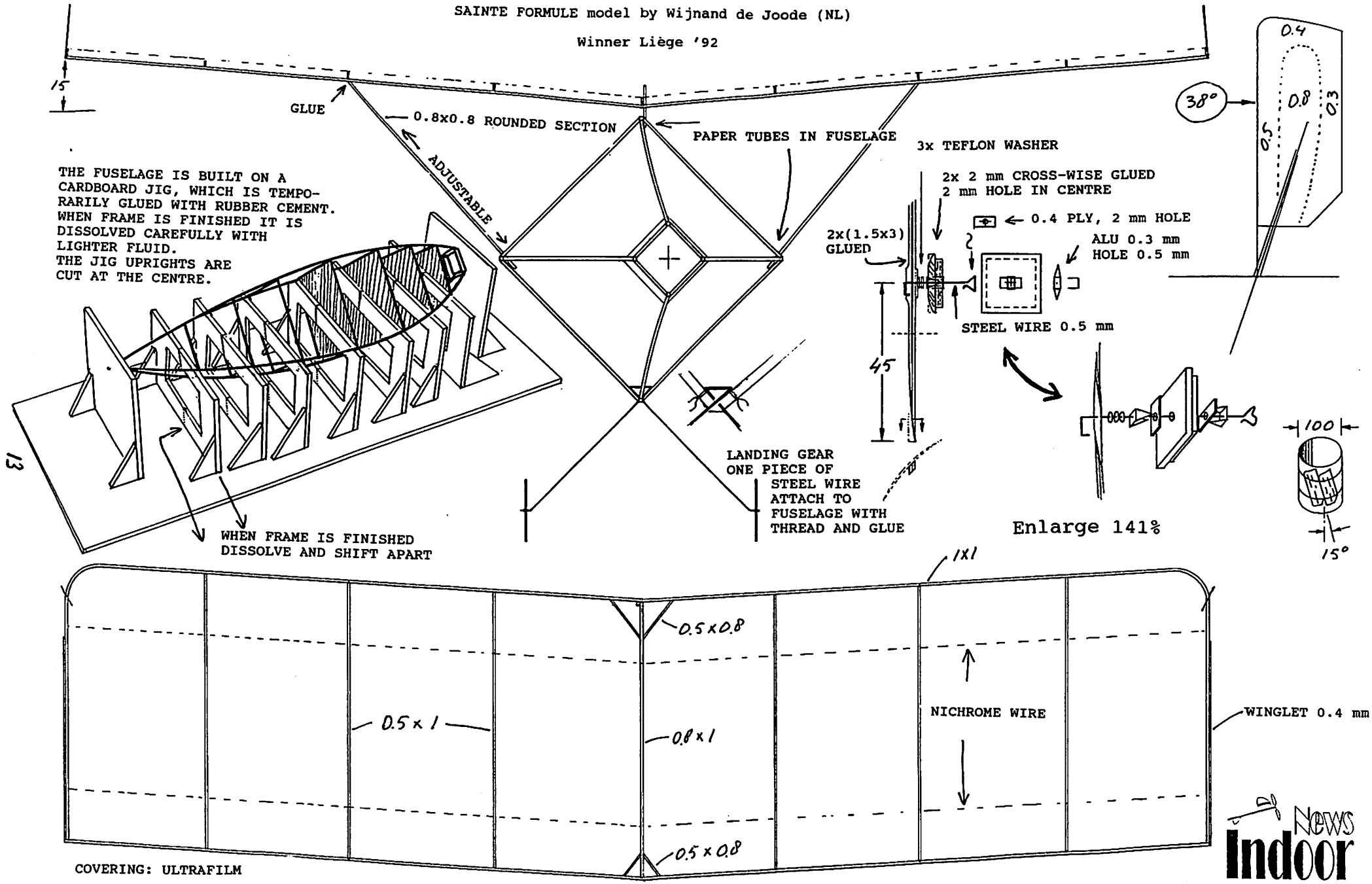
Winner Liège '92

Enlarge 141%

Indoor News

SAINTE FORMULE model by Wijnand de Joode (NL)

Winner Liège '92



News Indoor

444 Henryton So,
Laurel, MD 20724
December 9, 1992

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

Dear Mr. Andre,

Report on results of the 1992 Japan vs United States F1d Postal Contest follows.

The rules for the Japan vs United States F1d Postal Contest are quite simple. These rules are.

1. Three man teams
2. F1d models, flown per FAI rules, 6 rounds over one or two flying days.
3. FAI Cat I (8 meter ceiling) flying sites. No fudge factor, best time wins.

There were very good times posted with three flyers breaking 30 minutes. Top flyer was Bob Randolph with 33:15 and 34:18, both flights exceeding his FAI Cat I world record. Bob had not renewed his world record attempt sanction so his 34:18 flight was not a world record. However, it was good for a new USA national record.

New Cat I 30 minute flyers, were Satoshi Kinoshita of Japan and for the USA, Steve Brown, the latest members of a very exclusive club. Two years ago, no one in the world had done 30 minutes in Cat I. Prior to this contest, we knew of only two flyers in the world who have broken 30 minutes under a Cat. I ceiling. This contest has apparently doubled that number.

One thing which has been confirmed by this contest is the importance of v.p. props for low and medium ceiling F1d competition. All of the top flyers used v.p. props.

Important to consider is the fact that v.p. prop technology makes it possible to do top times, even at a marginal site. Addition of sound absorbing panels to the ceiling has made the Loma Linda gym a difficult room to fly in. Rough edges of the panels would snag bracing and wreck wings. With v.p. props, Randolph and Brown were still able to do 30 minutes.

Less familiar with the peculiarities of the Loma Linda site, Cezar Banks had severe problems with models broken and damaged by the sound panels. In spite of this, Cezar stuck it out to get 41:07, an average flight time over 20 minutes. This kept the team time high enough to secure first place for the USA West Coast team.

For the Japanese side, the outstanding individual performance would be the 30 minute flights of Satoshi Kinoshita whose model featured an improved v.p. prop.

Mr. Shigeyoshi Nonaka, the organizer for the Japanese side, moved up from last place in 1991 to 4th place, right behind the 30 minute flyers in 1992. Nice flying indeed!

The Japanese have to be complimented for a very fine team performance and contest organization. They conducted qualification contests to select teams representing three cities, Tokyo, Kawasaki and Nagoya. The Nagoya team, apparently sponsored by Toyota, is now known officially as the Toyota team. The good organization was reflected in good flight times.

The Japanese have proved to have more first class flyers than we realized. F1d is alive and well in Japan. We have a real contest here!

Best regards,

Tom Vallee

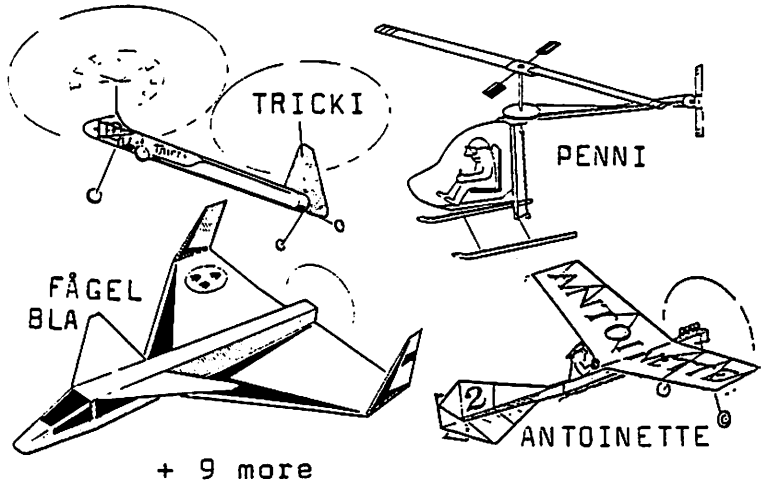
Thomas Vallee

USA - JAPAN F1d POSTAL CONTEST - 1992

INDIVIDUAL STANDINGS

	Contestant's Name	Side	1	2	3	4	5	6	Total
1	Bob Randolph	USA	33:15	34:18	—	—	—	—	67:33
2	Satoshi Kinoshita	Japan	—	25:17	30:39	31:29	—	—	62:08
3	Steve Brown	USA	16:13	24:49	27:41	30:36	30:50	—	61:26
4	Shigeyoshi Nonaka	Japan	24:29	26:21	27:54	9:55	5:18	—	54:15
5	Toshiaki Okada	Japan	2:02	21:08	26:37	17:32	8:19	27:09	53:46
6	Kazumasa Kihara	Japan	22:44	26:14	26:26	25:55	—	—	52:40
7	Thomas Vallee	USA	25:00	25:04	23:10	25:48	25:43	25:53	51:41
8	Ryosuke Harada	Japan	8:28	6:17	16:51	28:28	—	—	45:19
9	Kenichi Ohota	Japan	10:25	6:24	23:21	21:13	2:21	—	44:34
10	Hideyo Enomoto	Japan	6:42	:24	:50	22:30	22:02	21:24	44:32
11	Cezar Banks	USA	17:50	7:52	3:15	23:17	11:46	7:22	41:07
12	Dan Belieff	USA	11:57	01:10	13:25	16:29	20:06	18:00	38:06
13	Phillip Kleinert	USA	17:41	15:18	17:50	19:23	1:53	—	37:13
14	Ryuuji Matuzawa	Japan	7:45	8:37	16:53	19:11	4:46	—	36:04
15	Isao Hamada	Japan	2:25	5:28	15:34	18:01	12:50	3:49	33:35

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+ 9 more

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In Britain you can get most of the kits from BALLARD's.

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

USA - JAPAN F1d POSTAL CONTEST - 1992
Standing By Team

Team - USA West Coast

Location - Loma Linda Academy School Gym
Dates - 9/18/92, 10/11/92

Contestant's Name	1	2	3	4	5	6	Total	Standing
Bob Randolph	33:15	34:18	—	—	—	—	67:33	
Steve Brown	16:13	24:49	27:41	30:36	30:50	—	61:26	
Cezar Banks	17:50	7:52	3:15	23:17	11:46	7:22	41:07	
						Total	170:06	1

Team - Japan Kawasaki

Location - Yoyogi Sport Center
Dates - 09/25/92 11/31/92

Contestant's Name	1	2	3	4	5	6	Total	Standing
Satoshi Kinoshita	—	25:17	30:39	31:29	—	—	62:08	
Kazumasa Kihara	22:44	26:14	26:26	25:55	—	—	52:40	
Ryosuke Harada	8:28	6:17	16:51	28:28	—	—	45:19	
						Total	160:07	2

Team - Japan Tokyo

Location - Yoyogi Sport Center
Date - 11/05/92

Contestant's Name	1	2	3	4	5	6	Total	Standing
Shigeyoshi Nonaka	24:29	26:21	27:54	9:55	5:18	—	54:15	
Kenichi Ohota	10:25	6:24	23:21	21:13	2:21	—	44:34	
Hideyo Enomoto	6:42	:24	:50	22:30	22:02	21:24	44:32	
						Total	143:21	3

Team - USA East Coast

Location - NASA Auditorium
Dates - 09/19/92

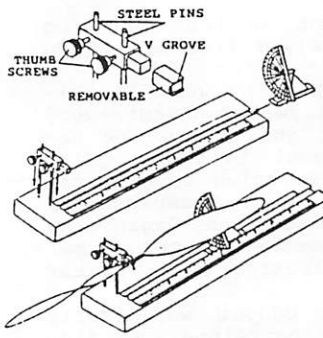
Contestant's Name	1	2	3	4	5	6	Total	Standing
Thomas Vallee	25:00	25:04	23:10	25:48	25:43	25:53	51:41	
Dan Belieff	11:57	01:10	13:25	16:29	20:06	18:00	38:06	
Phillip Kleinert	17:41	15:18	17:50	19:23	1:53	—	37:13	
						Total	127:00	4

Team - Japan Nagoya Toyota

Location - Kinrow Fukasi Kaikan
Date - 10/25/92

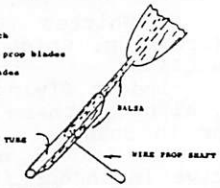
Contestant's Name	1	2	3	4	5	6	Total	Standing
Toshiaki Okada	2:02	21:08	26:37	17:32	8:19	27:09	53:46	
Ryuuji Matuzawa	7:45	8:37	16:53	19:11	4:46	—	36:04	
Isao Hamada	2:25	5:28	15:34	18:01	12:50	3:49	33:35	
						Total	123:25	5

THE SUPERIOR
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SOURCES OF INFORMATION

Indoor flying is a rare pastime and hence it can be difficult to find and locate the information you need, like materials sources, magazines, books, etc.. Some people have compiled catalogues of these sources to make your search easier. John Fredriksen sent information about the following:

Directory for Rubber Powered Model Kits

by Ray Hayes

This directory lists catalogs of kits, plans, building supplies, information about books, magazines, club news letters, organizations of both indoor and outdoor. As a bonus it also gives some useful building tips and an extract from the Cloudbusters Newsletter. The booklet can be obtained from Ray Haines, 69598 Brookhill Dr., Romeo, Michigan 48065, USA. Price postpaid in the US is $3.95. Outside Europe add $2.90 for postage.

Cottage Wings

Bill Warner has compiled a list of more than 100 useful adresses for scale interested flyers. This guide is available for $1.00 and a large SASE. Non-US: please send some more money. Write to: Bill Warner, 1370 Monacle Av., Porterville, CA 93257, USA.

Flying Aces Club

When both outdoor and indoor scale is your interest, then the Flying Aces Club is the one to join. The club is led by an enthousiastic bunch of people and they have just listed their 1000th member. Their 24 page newsletter appears six times a year. Cost is $9.00 per year in the US and Canada. Overseas cost is $12.00. Make checks payable to Flying Aces, send to FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506, USA.

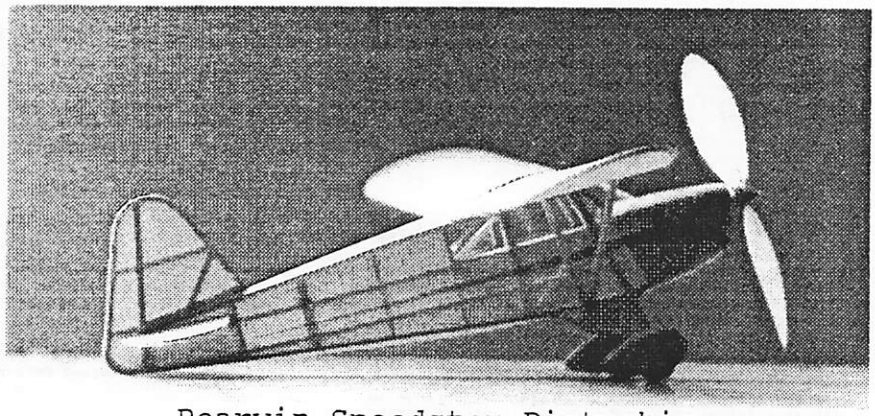
MORE MODELS IN THE MEDIA

We are always encouraged to see our hobby favorably featured in publications outside the usual modeling press.

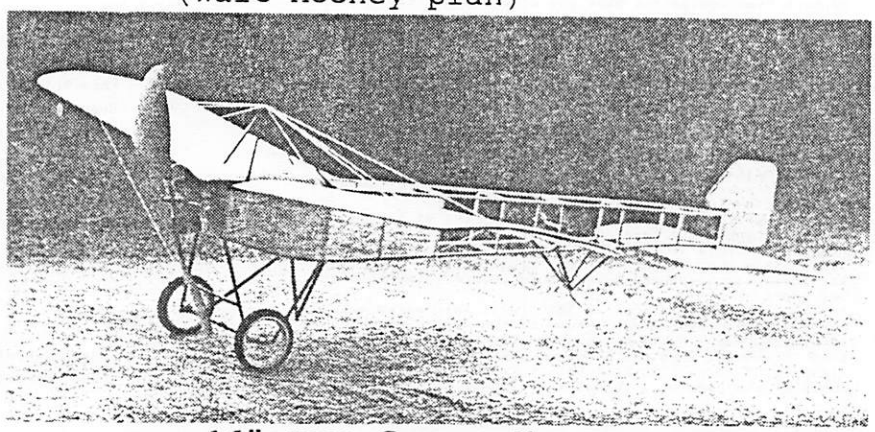
Recently a Swedish medical magazine called *Sting* devoted their front cover and three pages to Dr. Tomas Hultgren, a skilled surgeon specializing in hand restoration. However, a major portion of the article was devoted to his model building activities with "balsatra och japanpapper" fliers, such as his beautiful Sopwith triplane featured in one of our photographs. The magazine photographer, Dan Coleman, captured two sparkling-clear photos of Dr. Hultgren launching models which truly convey the essence of indoor flight.

Among the flying sites employed by indoor modelers in Sweden is the large building where the Nobel Prize gala dinners are conducted, and as described by Tomas: "During this year's dinner, the heat of the crowded hall dislodged a model which had earlier stuck close to the ceiling, and the plane came down in slow circles towards the tables, to the amusement of the Nobel Laureates and other guests. No doubt a welcome interlude on this rather stiff occasion!"

Tomas Hultgren from Sweden sent me pictures of some of his nice Peanut models. Just coincidently I received this piece from Model Builder about Dr. Hultgren from someone else.....



Rearwin Speedster Pistachio
(Walt Mooney plan)



16" span Sommer Mom
(Bill Hannan plan)

NO CEILING TOUCH

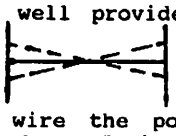
The Dutch recently held a competition where ceiling touching was disallowed. This forces the competitors to use their best flying skills and to make optimum use of rubber and torquemeter. For each round one second flight attempt was allowed in case the flight accidentally did touch the ceiling. Judgement of touching or not touching was up to the timekeeper. There was a jury that observed the flying. We flew in a Cat I sports hall and the class flown was Sainte Formule.

We have not tried it yet for the longer flying model classes. Particularly with F1D there might be time schedule problems, because of the second attempts. On the other hand the flights will be much, much shorter. Many people find the ceiling scrubbing to be against the nature of indoor flying. It may make the sport more attractive. If you do this experiment in your country let us know what your experiences are.

Kujawa's plan

The plan of Sylwester Kujawa's WC winning plane lacked the dimension of wing chord. This is 235 mm.

Boyd Felstead remarks about the DeBatty compression rib  as used by Kujawa:

This rib works well provided that cross-bracing is used: 

With a single wire the post can fall over quite easily as Cezar Banks found to his cost at an earlier World Champs. With the DeBatty rib I can't see the need for laminated ribs (3 layers) but with <u>both</u> (wire bracing + 3 laminations) that rib would sure be strong!!

Some news from China

Ed Whitten (USA) sent me the following information, which he received from mr. HUANG YONGLIANG:

"Indoor flying is not doing well in China, although there is a citywide contest every year in Shanghai. Most of the flyers are beginners. Mr. Lu of Shanghai is still quite active in indoor flying. We tried to participate in the 1992 Indoor World Championships held in Poland. I wrote to the Organizing Committee for the Regulations and entry forms, but we gave up owing to lacking funds in our budget.

Our national sports budget was mostly spent on the Olympics in Barcelona. We did, however, participate in the 1992 Control Line world Championships in Czechoslovakia as well as an I/CH (Ed.: Indoor Championships?) in the Far East part of Russia. As I understand it the 1994 Indoor World Championships will be held in Romania. Maybe we will send a small indoor team there. It depends on the budget.

One big thing is that we will host the 1994 World Control Line Aeromodelling Championships in Shanghai, China, in October 1994. We will also participate in the 1993 World Free Flight Championships in Lost Hills, California. I wish that I'll be there."

中国,北京100021, 劲松
408楼-7门12号 黄永良收

HUANG YONGLIANG
BLDG. 408, DOOR 7, ROOM 12
JINGSONG, BEIJING 100021
P.R. CHINA

Somers foil

Jan Somers, who sells thin mylar (see IN 20), has moved to Reigershof 16, 2751CV Moerkapelle, The Netherlands.

From Sven Olov Linden:

Hovstavägen 15
S-703 63 Örebro
Sverige (Sweden)
15th Oct. 1992.

Dear Thedo,

You ask me of info regarding The Globe. I have only tried once to fly there for a few hours. There is an electric rig -movable but not as high as we want it to be ! So there is only about 25-30 m free space- even if the whole construction is 80 m from bottom- under earth -to top.
I managed to fly through the rig and had my F1D-model landing at the highest seatrow. Leif Englund of Finland was there too and he made a 30+ min flight without touching the rig.
We can not rent the site -50.000 SEK for one evening !
The aviability depends on lack of activity! Arne Pontan, brother of Sven, is a TV-photografer can arrange an allowance for us when he knows of a pause in events. When we were there in 1989(?) we were promised two days of flying, but it was reduced to 4 hours one day !
Perhaps Sven Pontan can give you more and positiv info !

I got the official result of Swedish Indoor Champs last Friday !I enclose a copy !
We flew in Helsingborg in the B-hall of the "Idrottens Hus". It is a smaller part of the building- the other part is the A-hall. In the center it is 14 m to the ceiling but the hall is rather narrow.
F1D is at the moment the only class for a Swedish Championship, the other classes have not the same reputation. The winner is declared "Riksmästare" not "Svensk Mästare" !
From next year we persuaded the annual meeting of SMFF to declare F1L- "EZB" as a Swedish Championship.
As Helsingborg is quite far from the center of indoor activity there were less competitors as usual. At the moment we have a decline in indoor activity - less workless money- more expensive travelling. Oh yes, you know it! There has also been fewer young people interested in our sport.
Perhaps the better status of "EZB" will help us to get new modellers interested. I know of two very clever and interested men - not juniors - who turned their interest from "Pea-nut", when the Swedish Champion mark disappeared to only "Riksmästare"! They said it had a taste of the name of a cheese ! "Riksost" !

When I have more and more positive information to give I will let you know !

Yours sincerely
Sven Olov

RESULTATLISTA FRÅN SM-TÄVLINGARNA I HELSINGBORG 920925

F1D

1.	Sven Pontan	Haninge MFK	16.19	13.15	29.34
2.	Lars Lindén	MFK Nimbus	14.30	13.17	27.47
3.	Peter Comét	MFK Vingarna Hbg	12.22	12.15	24.37
4.	S-O. Lindén	MFK Nimbus	11.59	11.11	23.10
5.	Christian Edlund	- " -	6.02	5.22	11.24

F1L

1.	Thomas Hultgren	Stockholms RFK	6.24	5.25	11.49
2.	Sven Pontan	Haninge MFK	7.27	3.07	10.34
3.	Christian Edlund	MFK Nimbus	4.40	3.29	8.09
4.	Magnus Pettersson	- " -	2.48	2.41	5.29

RM PEANUTS

SENIORER

1.	Thomas Hultgren	Stockholms RFK	61 sek	57 sek	247 poäng
2.	Georg Thörnqvist	Haninge MFK	38 "	35 "	244 "
3.	Lars Tolkstam	MFK Nimbus	62 "	49 "	234 "
4.	Sven Pontan	Haninge MFK	55 "	39 "	220 "
5.	Georg Törnqvist	Haninge MFK	39 "	33 "	207 "
6.	Lars Tolkstam	MFK Nimbus	32 "	30 "	191 "
7.	Anders Sellman	MFK Vingarna HBG	31 "	28 "	185 "
8.	Sven Pontan	Haninge MFK	9 "	-- "	129 "
9.	Thomas Johansson	Lunds RFK	22 "	22 "	122 "
10.	Peter Comét	MFK Vingarna HBG	16 "	15 "	121 "

JUNIORER

1.	Johan Svanestrand	MFK Nimbus	29 sek	28 sek	186 poäng
2.	Johan Malmberg	- " -	27 "	25 "	148 "

HELSINGBORG 920601
MFK VINGARNA