

A History of Indoor Duration Flying.

By Tony Hebb. February 2013.



Photo from an Australian Airlines in flight magazine circa 1979.

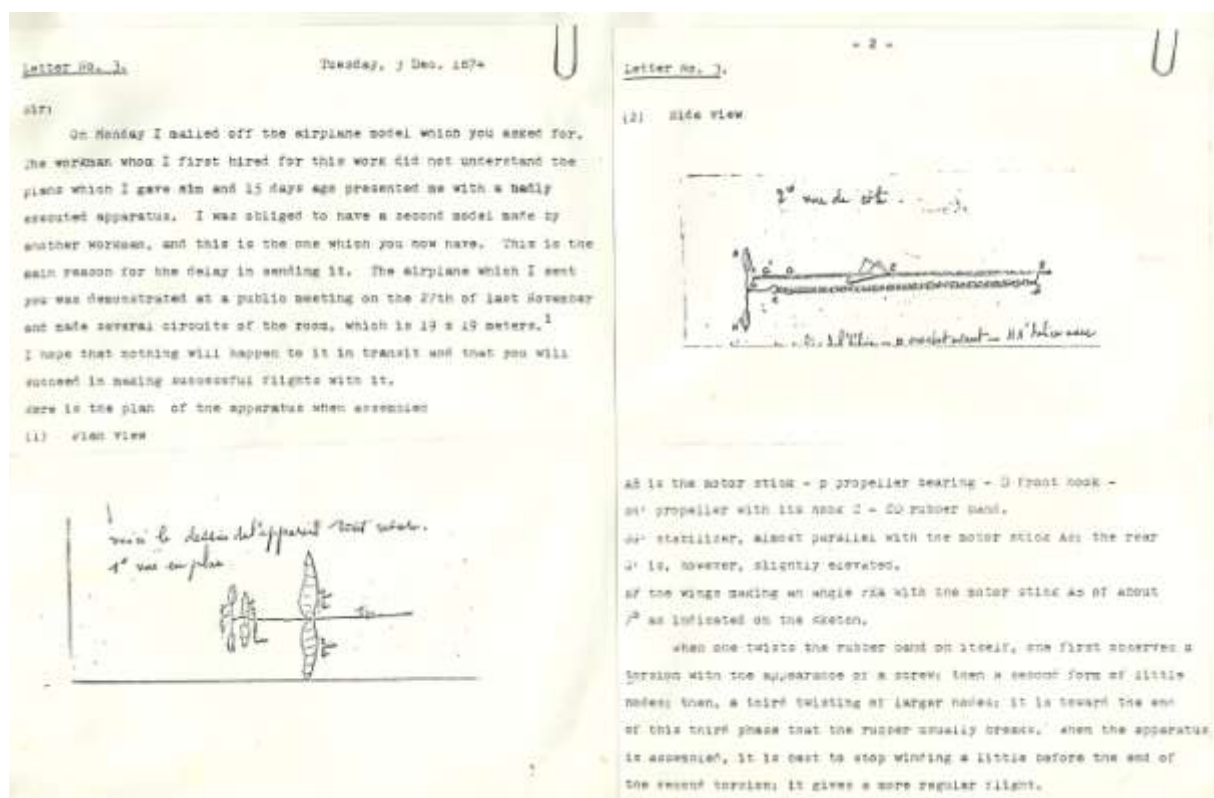
Introduction.

This is intended as a living document. I've tried to be as accurate as possible but new information is sure to become available from time to time. I am going to publish what I have and hopefully add more material as I go along. If you find inaccuracies or feel you have information that would be useful to add then please contact me at pro65.itc@gmail.com.

Right now my own personal recent indoor "history" goes back to when I restarted this aspect of the hobby in 2009 – which happened to coincide with the very last year that Cardington was available to us in the UK! Prior to that I had built some indoor microfilm models whilst still at school around 1961 - inspired by the exploits of Reg Parham, Max Hacklinger and many others at that time.

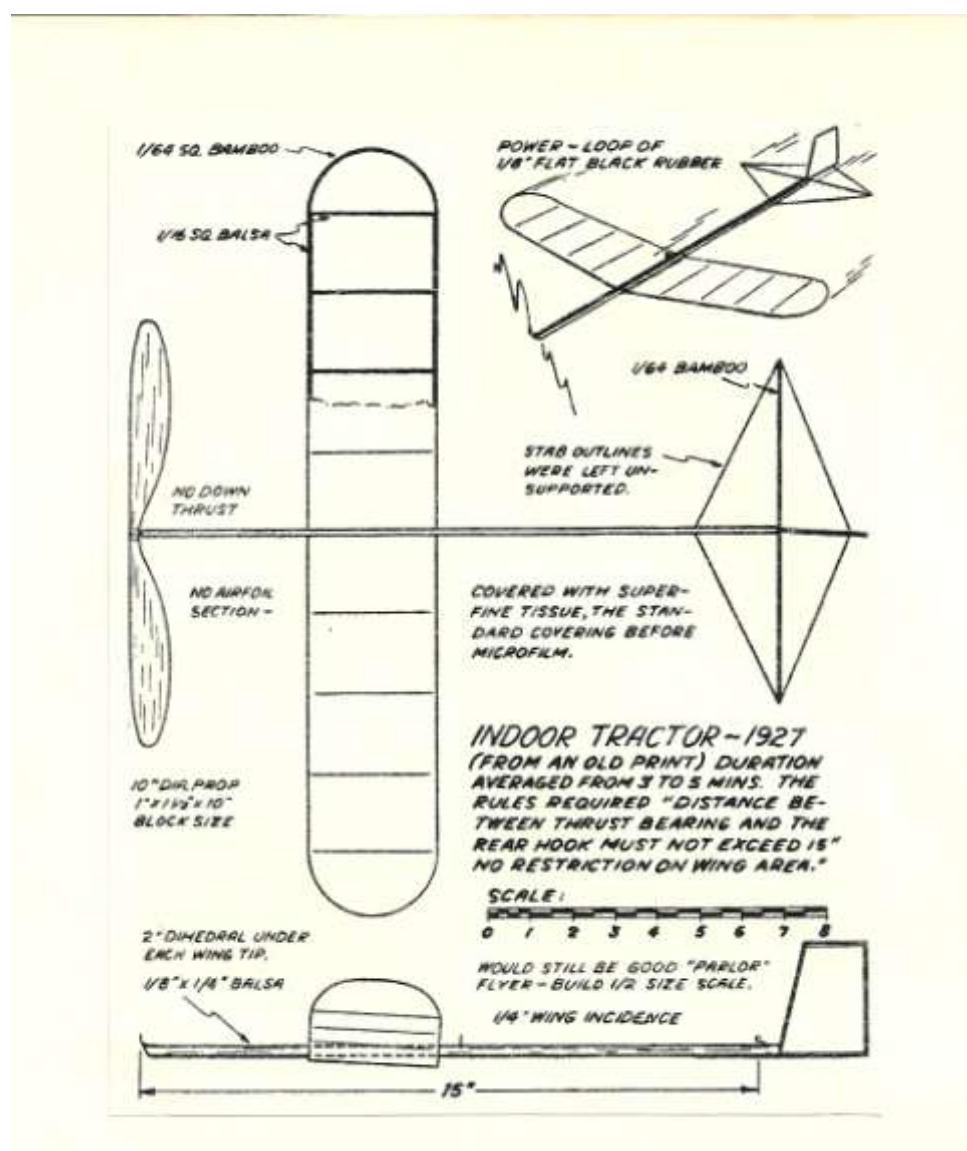
But indoor flying goes back much further than my lifetime.

Just recently I have been fortunate to have access to some fantastic indoor archive material from Bob Bailey who in turn inherited them from the late Reg Parham. In this there are a series of letters between a Mr. T J Bennett of Oxford, UK and M. Alphonse Penaud, France dated December 1874. One of these letters is reproduced here and you can see that M. Penaud supplied a readymade rubber powered model for the sum of 31.65 francs which had earlier been demonstrated flying several circuits around a 19m. square room – how amazing, a canard too!! Not to mention ARTF!

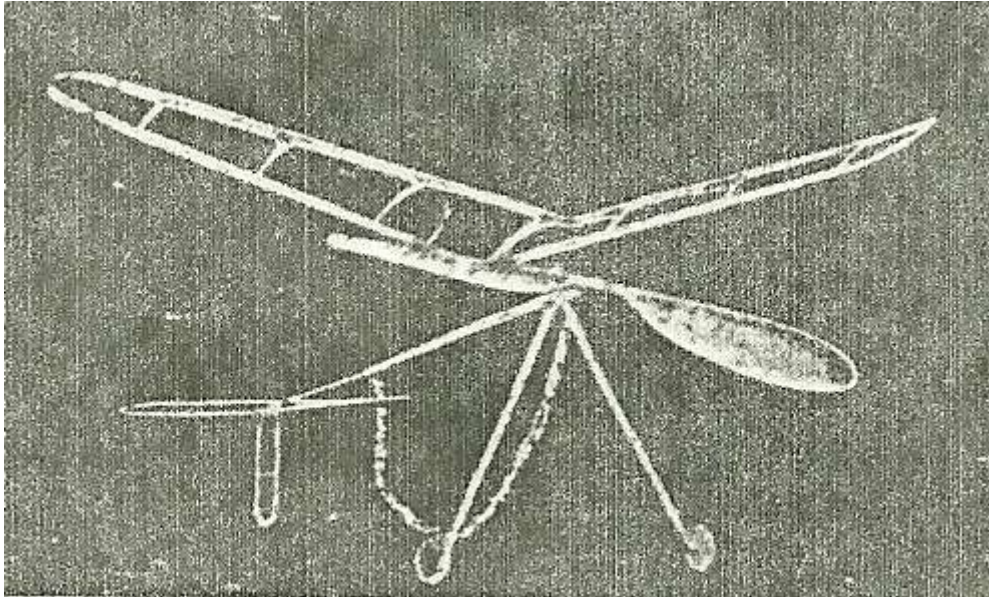


In David Erbach's excellent "[A Century of Indoor Models](#)" (look up the full article on line) which was dedicated to his father, Walter, also a well known indoor duration modeller in the 1940s, he traces the history of early indoor flying to New York City in the early 1900s where the objective was still to fly the furthest distance. Due to poor weather the contest was transferred indoors. The winners in those days hitting the far wall of the stable block they were in. Some things don't change then, the weather, the wall bumping and the availability of flying sites!!

The terrific advances in aviation during WW1 lead to a great increase in air mindedness and aero modelling was much encouraged with huge numbers participating. By 1928 National contests were being held in the USA with significant prizes on offer. Flights in the region of 11 minutes were being achieved with models similar to this Indoor Tractor model. I also saw a reference to our much loved Ambroid – not sure how long it had been around by then though!



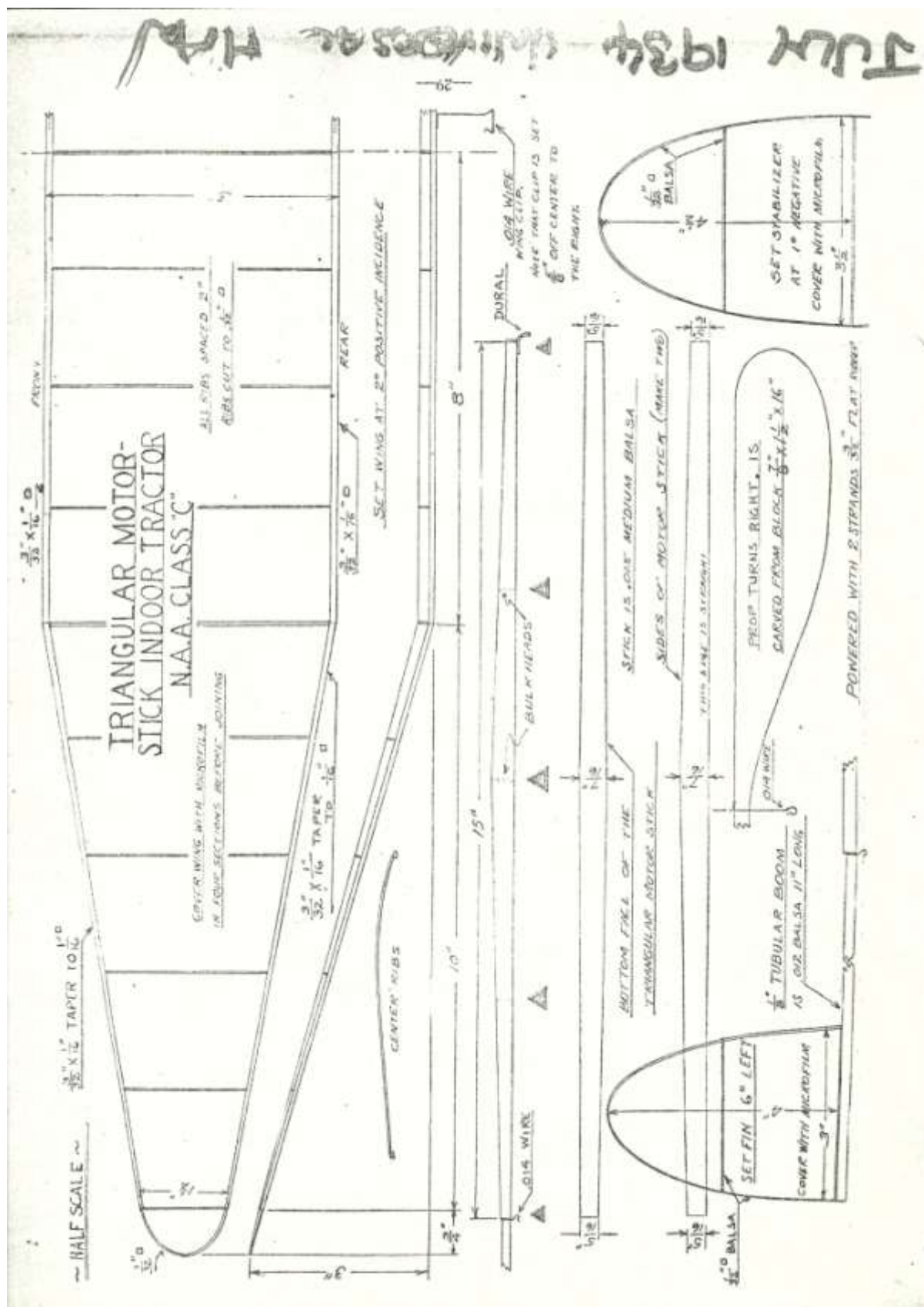
Ron Williams in his book shows a plan of a model c1930 of 28" span with pointy wing and tail tips. Here's a picture of Carl Goldberg's model "Baby ROG" which flew for a record time of 9m35s – he said at the time that this could easily be bettered!



In 1932 microfilm emerged and this enabled lighter models to be made, flight times pushed up to around 19 mins.

This is a typical model from that era, note the triangular 15" MS but round tailboom, I was amazed to see 12 and 15 thou. wood specified for these, also 36" span microfilm covered wings/tail.

There were some very elegant models around this time and really not that dissimilar to what we now fly.



There followed rapid development with lighter hollow Motor Sticks, lengthened tailbooms, improved airfoils, use of microfilm and then the holy grail - improved Brown Rubber – the original TAN?!! This was probably driven (!) by golf ball technology even back then.

In 1933 duration increased from 12mins to 17mins and Carl Goldberg recorded an unofficial 19m34s.

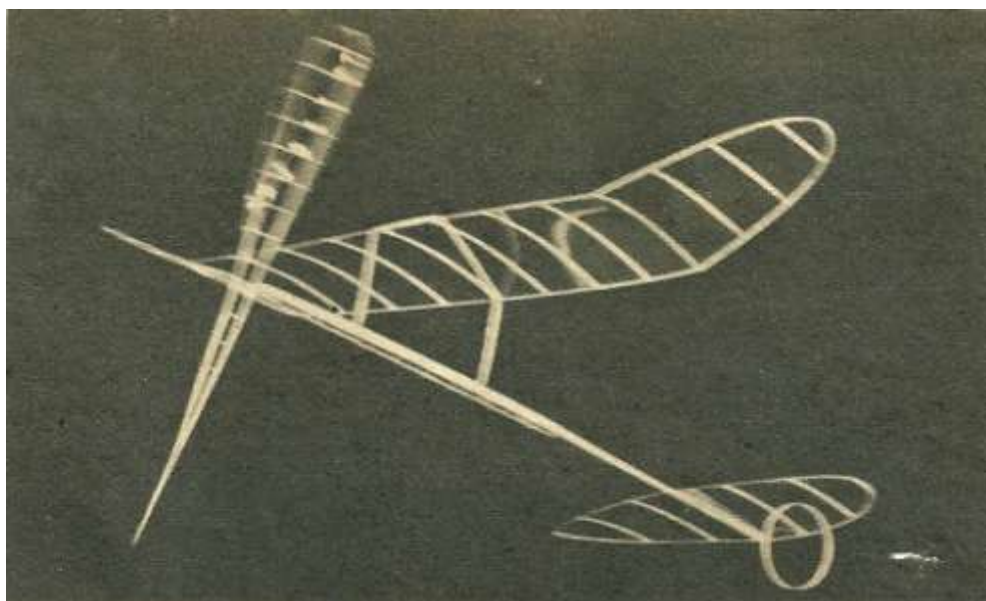
A recent film clip came to light from Tapio Linkosalo of Finland of a successful record attempt in 1934:- <http://www.youtube.com/watch?v=Q6t8vdZFcRw&feature=youtu.be>

That same year the first Frank Zaic Yearbook was published, allowing greater dissemination of knowledge. I spoke recently to Geoffrey Lefever who had met Frank in the 1950's, and he pointed out just how important these annual publications were – no instant internet in those days – communication with fellow overseas modellers was by post. It allowed hobbyists and competitors alike to keep in touch with developments around the world. Geoff has treasured copies from 1935!

The US contest indoor classes became split by wing area and Carl Goldberg won the US Akron Nationals with a flight of 22:59.

There followed a series of record duration increases with Robert Jacobson taking this to 25 minutes in 1936. In 1938 ultra thin (one thousandth of an inch) Tungsten bracing wire was introduced and this led to even lighter structures becoming possible and times pushed up to the 27 minute mark. As to be expected little development happened during the years of WWII but soon after hostilities ended duration flying resumed with the magical 30 minute mark coming ever closer.

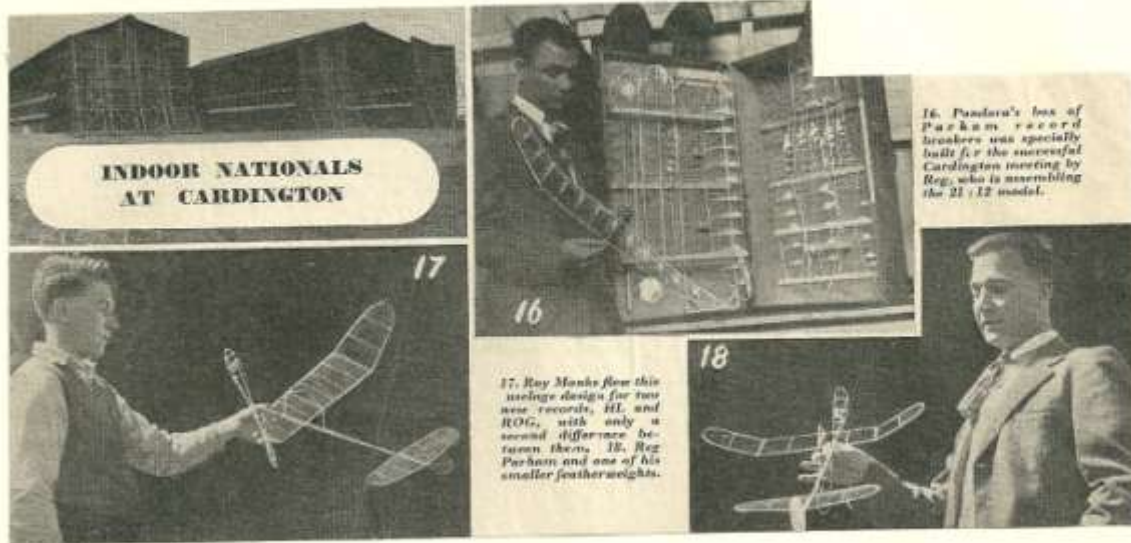
1949 – Pete Andrews flew for over 32 minutes for the first time at the 175ft ceiling of Lakehurst Naval Station hangar, NJ, USA. This was a large braced microfilm model - amazingly Pete predicted that flights of over an hour should eventually be possible.



Then, as now, Pete acknowledged the vagaries of indoor flying; either Frank Cummins or himself could have achieved this time earlier IF they had the right rubber, if models hadn't landed on top of the airship or if they hadn't hung up on a potentially great flight – plus ca change!

1950s – Post war flying now well established and medium sized condenser paper covered models and large microfilm models were being flown around the world.

In the UK the use of the old airship hanger at Cardington was obtained briefly in 1954 and staged the British National Championships that year. Many different types of indoor craft were being flown including autogyros, helicopters and ornithopters – all of which have rarely been seen since this time.



| Indoor Nationals | | | | | Total |
|--|------------------|----------|----------|----------|---------|
| Agg. of three flights: | | | | | |
| R. Copland | Northern Heights | 19 : 00 | 19 : 38 | 19 : 59x | 58 : 57 |
| P. Reid | Birmingham | 17 : 16 | 17 : 44 | 21 : 09x | 56 : 09 |
| R. Parham | Worcester | 19 : 19x | 16 : 32 | 16 : 38 | 52 : 29 |
| R. Monks | Birmingham | 16 : 36 | 18 : 03x | 17 : 41 | 52 : 20 |
| x Denotes best individual contest flights. | | | | | |
| Other best flights: Robson 14 : 19; Poole 14 : 13; Muslow 13 : 32; | | | | | |
| Young 13 : 08; Chamberlain 9 : 18 | | | | | |
| NEW RECORDS: | | | | | |
| H.L. Stick: R. Parham 21 : 12. R.O.G. Stick: R. Copland 14 : 22. | | | | | |
| H.L. Fuselage: R. Monks 10 : 36. R.O.G. Fuselage: R. Monks 10 : 29 | | | | | |

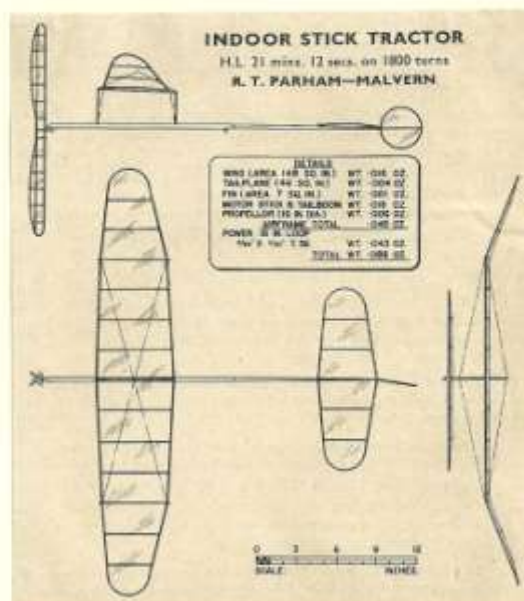
AERO MODELLER November, 1954

Record Flights at Cardington

Records again tumbled in rapid succession at the third Cardington Meeting beginning with Bob Copland raising his R.O.G. record to 15 : 22 on half turns. Fanning out the prop to bigger pitch he made 17 : 47 on full turns and then further improved to 19 : 29 with finer pitch.

The new Stick R.O.G. record goes, however, to Ray Monks for a 20 : 30 flight and the honour of first flight to the 180 feet high ceiling to Phil Reid—also of the Birmingham Club on what would surely have been a new hand launched duration record.

Ray Monks also managed 4 : 13 with a new tailless design and Reg Parham from Malvern—13 : 16 for a new figure with his hand launched fuselage model. Reg still retains the Stick duration record at 21 : 12, the scale drawing for his model being reproduced below.



Interest in indoor flying was high and this meant that Britain was amongst the world leaders in duration flying. Prior to this event domestic competitions were held in The Manchester Corn Exchange in 1950 and '51 and even the Albert Hall – though I can find no record of the latter event!

It seems that the use of Cardington was short lived on this occasion however as the Corn Exchange hosted the Nationals in '57, '58 and '59 but with a much anticipated return to Cardington in 1960.

In 1959 Hungary staged the first trial meeting for the proposed International microfilm classes of under 35cm wingspan and over 35cm. This was flown in the Assembly Hall of the University of Debrecen with a ceiling height of 118ft. and was a great success. Best times were 14:27 (L. Englund) for the smaller models and 22:05 (K.H.Rieke) for the larger ones, very respectable.



1961 saw the birth of Indoor News and Views (INAV) magazine which continues in production right up to the present day, changes of course have been required along the way and the current format is fully on-line. The amazing thing is that all of the back issues are now available on-line free. It is an amazing repository of pretty well everything that has happened on the indoor scene over all those years. One of the great things about indoor duration flying has been the willingness of all participants to share their knowledge quite freely across international boundaries with designs, articles and even competition meetings being reported from all over the globe. There was much development being undertaken in those early years and many articles were given over to the black art of producing and using microfilm together with the delicate art of bracing your model without reducing it to a ball of wire, wood and microfilm! Somewhere in the depths of an INAV back issue there is a wonderful list of ways to wreck your model – its long! These guys were indoor heroes.

Cardington held the first FAI International Championships for 90cm microfilm models in 1961 and what an eye opener it was. With a ceiling height of 150ft and large floor space there were few better venues in the world to stage such an event. Joe Bilgri (US) became the first World Champion with a best flight time of 37:49, Karl Heinz Rieke was second with 35:11. But the astonishing news was that Max Hacklinger(Germany) flew for 44:20 after the event had finished, showing just what was to come in the future. I still remember the impact it had on me – it seemed simply unbelievable - and to be honest still does (well ok not quite!).

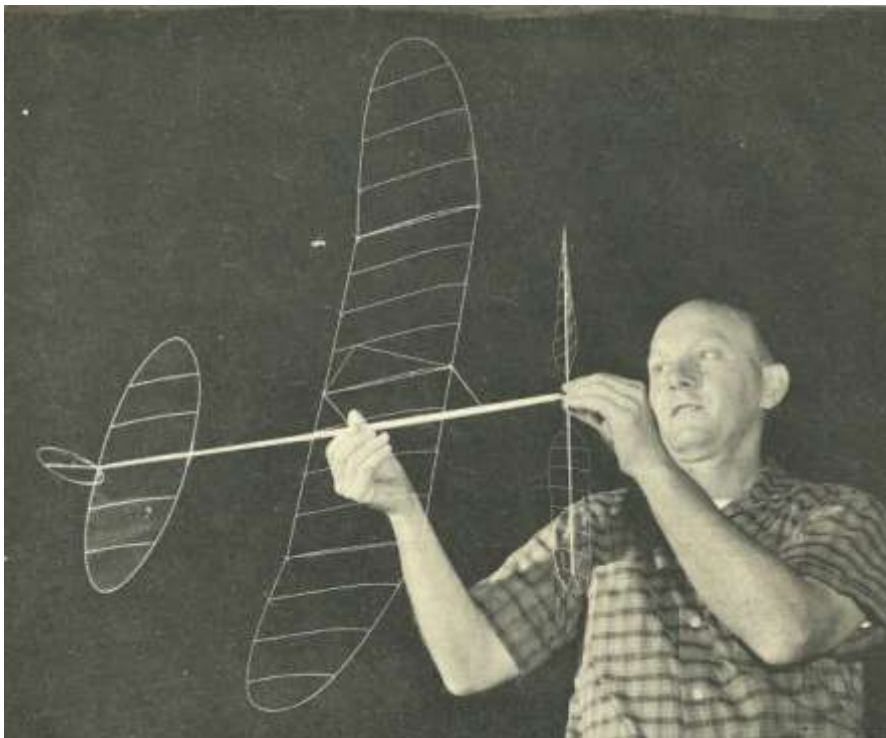
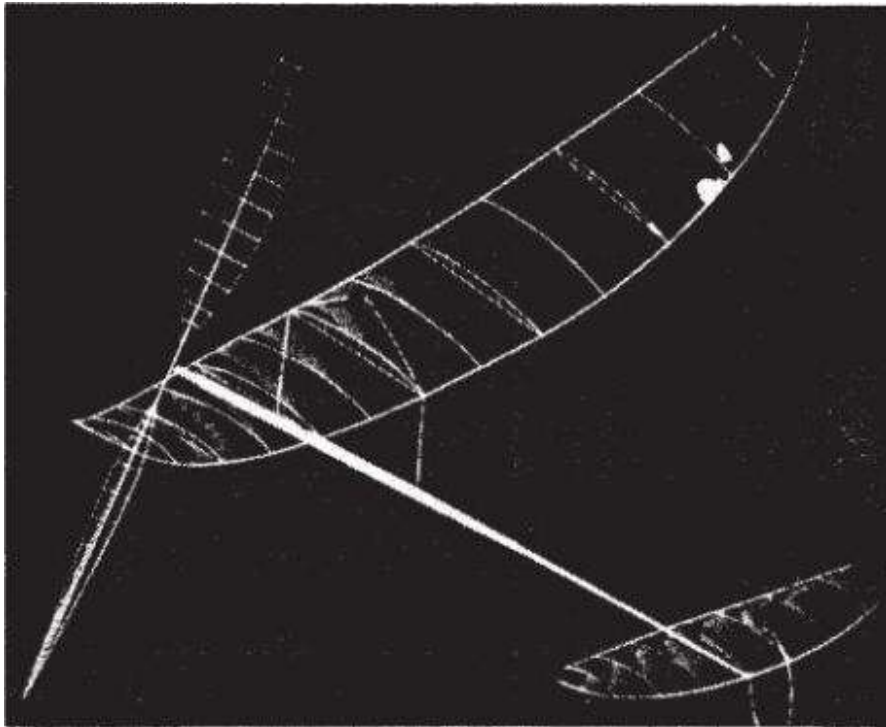
Thereafter it was decided to put the Internationals onto a two-year cycle beginning in 1962 and to encourage consistency the rules to establish the winner were changed from the best single flight score to a best 2 flight total from 6 possible flights.

Once more Cardington, the highest site in Europe, was selected as the venue. Carl Redlin USA) quickly achieved a flight of 45:17, the first flight over 3/4 hour. It was to prove insufficient as two German modellers, Karl-Heinz Rieke and Max Hacklinger put up totals of 88:48 and 86:17. The third

German team member finished fifth allowing the Germans to take both individual and team championships. These were simply amazing times. Britain's Ron Draper had made a 40 minute flight, three minutes longer than the winning time just a year previously, and it wasn't even enough to place.

There were 2 distinct model types being flown, the elliptical wings and dihedral of the Germans and the rounded wing tips with tip dihedral of the rest! Propellers were now almost all single spar.

The photo below is of Max Hacklinger's model, the second Joe Bilgri's "Carousel" – both beautiful in their own ways and perfect examples of the art of indoor duration modelling at the time.



In 1964 the FAI established records by ceiling height (CatI <8m, CatII <15m, CatIII <30 and CatIV over 30m) allowing everyone to have a chance of making record flights whatever venue they might have available to them. Interestingly, also in this year, the Internationals were not held due to lack of entries, this was thought to be because the current international class was simply too big and light to transport without damage.

At the conclusion of the 1966 World Championships, the FAI concluded that the 90 cm model was too large to build and transport. The maximum wing span was decreased to 65 cm. with no minimum weight and unrestricted rubber – so still very much an “open” competition. The new rules would take effect at the 1968 F1D World Championship in Rome.

This was to be the first of two contests for what proved to be a very short-lived set of rules. Jim Richmond took advantage of the rules change to start F1D and won his first World Championship.

The 1970 contest was held in the amazing but cool (55 degrees Fahrenheit) Slanic (Romania) salt mines for the first time and it was won by Jiri Kalina of Czechoslovakia.

With the smaller wing span and no minimum weight requirement, the 65 cm F1D model was built with a lower aspect-ratio wing than the 90 cm models and at a much reduced weight. Jiri Kalina's winning design was small: it weighed only 0.57 g, had a wing chord of 14.75 cm (5.8”) and a length of 23”. These would be the smallest and lightest F1D's ever.

For 1972 the rules changed again to include a 1gm minimum model weight limit, these rules then remained unchanged until 2001 following a lengthy campaign to reduce the size and complexity of models. The proposed changes were not especially popular with most of the competition flyers at the time.

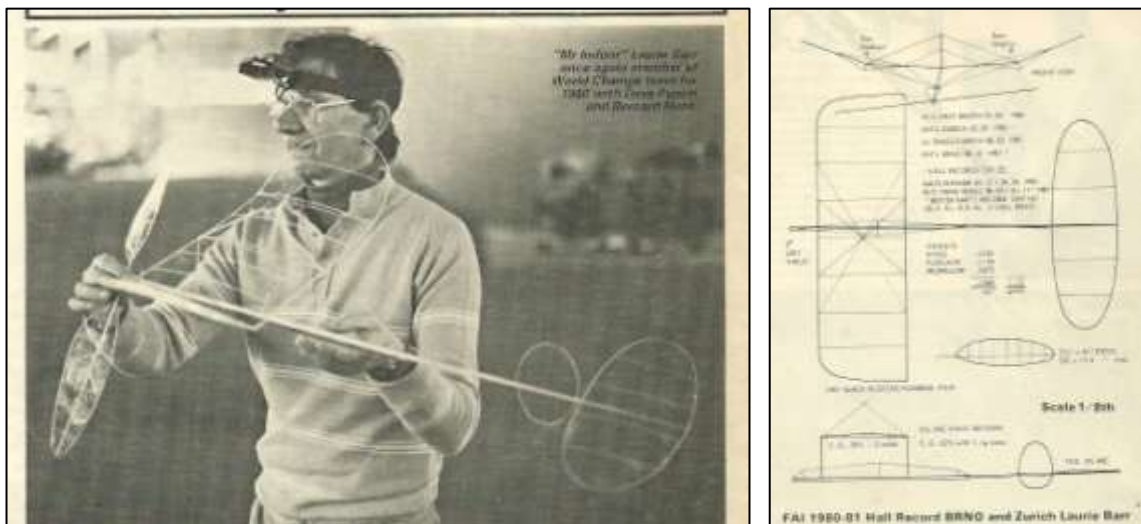
Below is Pete Andrew and his winning model from the 1972 Championships at Cardington, wonderful - and the model's not bad either!!.



Here's a classic photo of Reg Parham launching his duration model at Cardington in 1976.



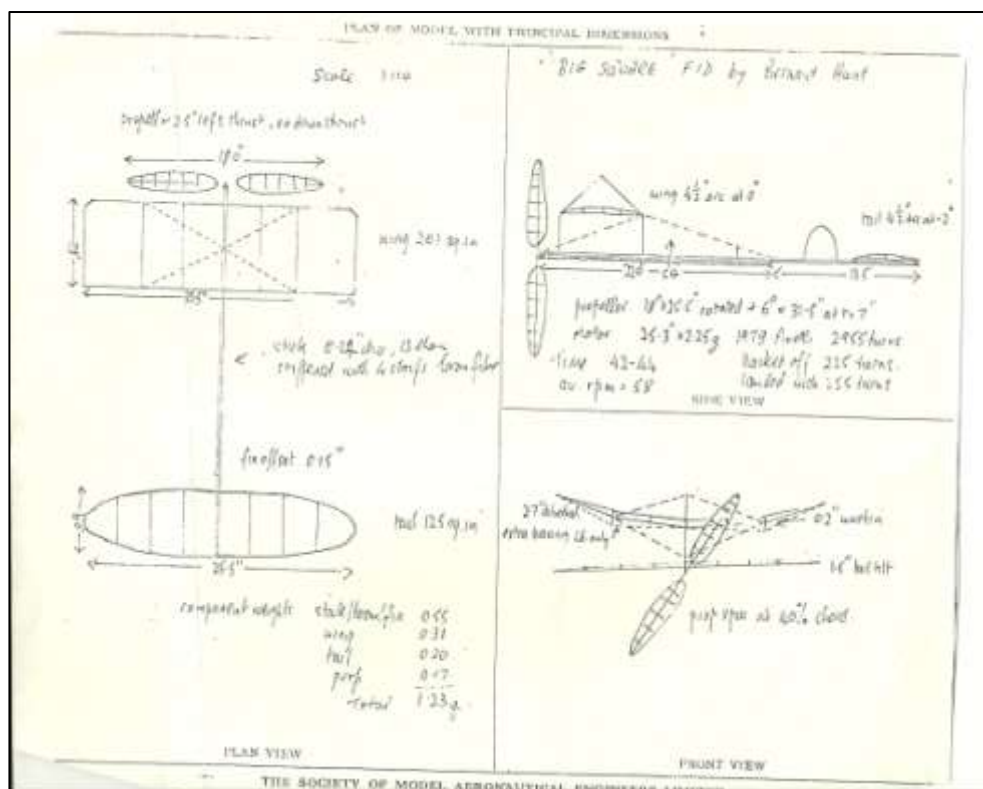
No account of British indoor flying would be complete without an acknowledgement of the commitment and unceasing contribution, often from his own pocket, made by the late Laurie Barr. The long continuous use that British flyers had of the Cardington hangars up until 2009 were almost single handedly down to Laurie. He was a keen competitor and following success in outdoor free flight secured many indoor championship successes together with a string of British and World indoor records. Here's an old photo of him in Cardington in 1979.



The one on the right is of Laurie's next model used in 1980/1, note how similar the layout is to the F1Ds we fly now!

I am indebted to Bernie Hunt, who was designing and very successfully flying many quite radical F1D designs during this period, for the following information which traces some of his ideas around this time.

First of all this is a design of an early tandem model, the 22" motor stick must have been interesting. Also note the CG aft of the rear post.



This next is Bernie's "No Hassle" design. Unbraced, 65cm, and way ahead of its time in that respect. The ultra short nose was to get the CG in the right place but that must have made balloon steering worrying, the prop was flared – partly to keep it off the wing leading edge. Bernie relates that his next model was a return to a tandem design which had great performance but somewhat difficult to handle reliably. Then to the classic new rules Big Square whose layout many people have followed over the last 12 years – myself gratefully included!

Interesting to note that boron was being used to strengthen MS at this time, since it came from the States I assume it had been used for some time before that.

There is probably sufficient of this good rubber stashed away to last the top flyers for the next decade or so, in the meantime there is a decent replacement in TAN SuperSport which is increasingly performing very well.

Other Developments.

O-Rings – the first mention I've found of these being regularly used was in 1984 World Champs – so they must have been in common use way before that. They are used on each end of the rubber loop to make it easier to hook up a tightly wound motor onto the model without damage or losing valuable turns.

Variable Pitch/Variable Diameter (VP/VD) Prop. hub development.

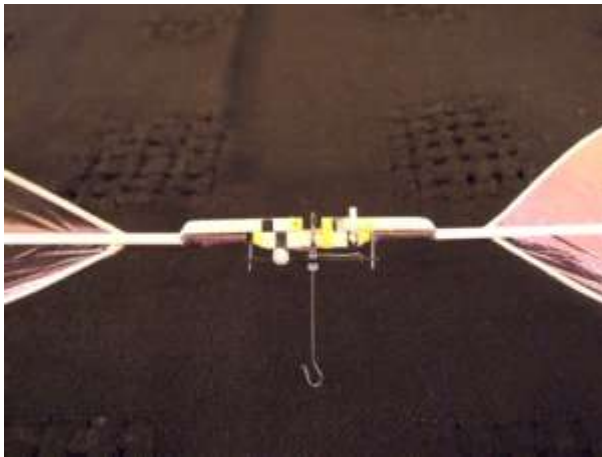
Almost all classes of indoor model will comfortably out climb the sites we have available; perhaps the Cargo Lifter hanger (now a theme park) in Germany was the exception. One way to limit the climb of a model is to increase the pitch or diameter of the propeller when flying on the initial high torque burst of the motor. Even then most models require some turns to be let out (backed off) the motor before flying but overall duration can increase as a greater part of the turns can be utilized.

Some classes (eg. F1D, F1M, F1R, Open Pennyplane, Open Microfilm)) allow the use of devices that can control torque by varying the diameter or pitch of the propeller. Most other classes such as F1L, EZB, Limited Pennyplane, Living Room Stick and Gyminnie Cricket do not allow them.

In 1973 Jeff Annis published a design for a simple VP mechanism, I've also seen a diagram dated 1977 for a torque variable prop hub (INAV) but it was not clear if it had a top and bottom pitch stop or whether it was simply allowing the blades to increase pitch against a spring or prop spar twist. By the time of 1980 World Champs. in West Baden (USA) several flyers were using VP mechanisms on their competition models with some success, these included the British team. By 1996 in Moscow (Idaho, USA) they were a necessary part of the model.

Variable Diameter hubs are now rarely seen - though Rene Butty had a lovely example at the last World Champs (2012 Belgrade) though it did seem to be struggling and Jim Richmond often used them. Jim in fact won the World Championships in Nagoya, 1984 with a VD prop.

Here are 2 examples of VP hubs, the one on the left is an early example by Mark Benns where the bottom pitch was determined by the flat prop spar/hub joint the second one by Ivan Treger has screw adjusters for each of 3 functions – low pitch, high pitch and spring tension.



F1D World Championships.

I've constructed a table of World Championship venues, individual winners + high flight time and team placings – mainly taken from those published in INAV. My purpose is just to show how the top times have been trending over all those years. If possible I'll compare them to other reported times in other contemporary events.

| When | Where | Ceiling feet | Longest Flight | Individual winner | From | Tm 1st | Tm 2nd | Tm 3rd | Comment |
|------|--------------|--------------|----------------|-------------------|------|--------|--------|--------|----------------------------------|
| 1961 | Cardington | 150 | 37:49 | J. Bilgri | USA | USA | FIN | GER | 90cm.Later 44:20 Hacklinger |
| 1962 | Cardington | 150 | 45:40 | KH. Rieke | GER | GER | GBR | USA | |
| 1966 | Debrecen | 96 | 32:42 | H.Beck | GER | GER | USA | FIN | |
| 1968 | Rome | 115 | 36:18 | J Richmond | USA | CS | USA | GER | 65cm, no min wt, unlmtd rubber |
| 1970 | Slanic | 240 | 37:52 | J. Kalina | CS | CS | USA | ROM | No GB entry |
| 1972 | Cardington | 150 | 38:18 | P.Andrews | USA | CS | USA | ROM | 65cm, 1gm min. Wt. |
| 1974 | Lakehurst | 175 | 35:44 | RCzechowski | POL | POL | USA | CS | Kopecky Cup 1 st time |
| 1976 | Cardington | 150 | 39:36 | B.Romak | USA | USA | GBR | CAN | End of UK hot summer! |
| 1978 | Cardington | 150 | 42:53 | J Richmond | USA | GBR | USA | CAN | |
| 1980 | West Baden | 98 | 36:23 | E.Rodemsky | USA | USA | SUI | GBR | |
| 1982 | Slanic | 240 | 36:56 | A.Morar | ROM | ROM | GBR | USA | |
| 1984 | Nagoya | 110 | 39:51 | J Richmond | USA | USA | POL | SUI | |
| 1986 | Cardington | 150 | 47:44 | J.Richmond | USA | USA | NED | GBR | |
| 1988 | Johnson City | | 44:09 | JRichmond | USA | USA | CAN | SUI | |
| 1990 | Johnson City | | 44:18 | JRichmond | USA | USA | CAN | ROM | |
| 1992 | Wroclaw | | 43:35 | Kujawa | POL | POL | USA | GER | |
| 1994 | Slanic | 240 | 44:23 | S.Brown | USA | USA | ROM | HUN | |
| 1996 | Moscow, ID | 120 | 50:29 | S. Brown | USA | USA | GBR | CAN | |
| 1998 | Slanic | 240 | 45:13 | S. Brown | USA | HUN | USA | GBR | |
| 2000 | Slanic | 240 | 47:21 | J. Kagan | USA | USA | GBR | ROM | John Tipper (UK) Longest |
| 2002 | Slanic | 240 | 36:15 | JRichmond | USA | USA | ROM | GBR | 55cm, 1.2gm,0.6gm rbr |
| 2004 | Slanic | 240 | 36:02 | JRichmond | USA | ROM | USA | HUN | John Kagan longest flt |
| 2006 | Slanic | 240 | 35:14 | L.Cailliau | USA | ROM | USA | HUN | |
| 2008 | Belgrade | 90 | 36:23 | I.Treger | SVK | USA | GBR | HUN | |
| 2010 | Belgrade | 90 | 39:27 | I.Treger | SVK | USA | HUN | ROM | |
| 2012 | Belgrade | 90 | 39:10 | L. Schramm | GER | USA | GBR | FRA | |

Indicates where longest flight also by Individual winner.

What an amazing record for the USA teams over the 52 years, 14 wins and never out of the first 3 places . Eight individual 1st places for Jim Richmond – quite incredible. Team GB hasn't performed too shabbily either with one team win and 12 podium finishes out of 26 events.

Long Flights.

The latest edition of the newly on-line INAV (www.indoornewandviews.wordpress.com) has the latest table recording all the flyers who have managed to stay aloft for longer than 40 minutes, the first such flight occurring in 1961 at Cardington by Max Hacklinger(GER). C.H. Rieke (GER), C. Redlin (USA) and R. Draper (GBR) all managed it the next year - also at Cardington.

Of course longer flights are also recorded with milestones being 50 minutes + and 60 minutes +.

The first flight over 50 minutes is credited to D. Kowalski (USA) at Akron in 1976. And Steve Brown flew 50:29 in the 1996 Kibbie World Championships – fantastic!

In 1996 Steve Brown (USA) flew 63:54 in the Santa Ana hanger(CatIV ceiling 150'), this being the longest flight to date, John Kagan (USA) made his own fantastic flight of 61:30 in 2005 at Lakehurst(CatIV 175').

40 minute plus flights are hard to come by with new rules F1D models. However in 2002 with the use of the super high (346ft ceiling) Cargo Lifter hanger in Germany Lutz Schramm (GER) managed it, followed by a couple of others by M.Krause and A. Popa the next year.

In 2012 Brett Sanborn (USA) flew his F1D for a fantastic 42:03 (Cat IV) also at Lakehurst.

Flying in the Cat III (90')Belgrade Trade Hall at the 2012 World Champs. Lutz Schramm (GER) flew for a record 39:10. So it looks possible that 40 minutes may fall in the fall in this hall (Belgrade - Euro. Champs, 2013). It didn't – though Ivan Treger with 39min came close again!

Other Classes.

In order to keep the account as straightforward as possible I've stuck to the F1D class to record the history of Indoor Duration flying. As you will have seen these have always been the very pinnacle of duration flying and are not for everyone. But the truth is that the other 99% of indoor flyers have a huge amount of fun and great competition from a myriad of other classes that have grown up over the years. In fact there are so many and their histories so varied that I admit defeat in even attempting to document them. However here are a few bits and pieces of information I gleaned whilst trawling through old documents, please feel free to add to this knowledge in any way you can.

The only classes I have in any way tried to document are those flown in the UK.

In 1966 the **American EZB** class rules were approved, this was later to become the International class F1L. In the States about 1960 Wally Miller first flew his EZB model design, the rules were simple and it has proved both a long term favourite as well as becoming known as the "hard" B since in the US it has no minimum weight limit and under high torque these models can be difficult to trim. By 1993 28 minute flights were possible (US rules) and many recent flights exceed 30 minutes. This class is no longer flown in the UK. In UK/Europe it is known as F1L and has a 1.2 gram weight limit, both classes have no rubber weight limit.

Other EZB/F1L Basic rules – Monoplane with 18” projected wing span and 3” chord, tailplane area maximum 50% of wing, motor stick and tail boom from single pieces of solid wood, propeller blades from sheet wood. No gadgets of any kind allowed and no microfilm!

In 1978 the **Pennyplane** class came into being, originating in the USA the Chicago Aeronuts are the group accredited with formulating the early rules. Nowadays Pennyplanes fall into 2 sub classes: (Open) Pennyplane – minimum weight 3.1 grams and maximum span and fuselage length of 18”, otherwise pretty much anything goes, this class is not flown in the UK. Novice or **Limited Pennyplane** (LPP) is however actively flown in the UK. Similar rules to the Open class but no VP props. and monoplanes only allowed.

1988 **Living Room Stick** (LRS) Not an easy class to build or fly since its rather small - but so much fun it is the most heavily entered class at the British Nationals. The creator of the class was Tom Vallee (USA) back in 1988. A group of Goddard Indoor Flyers wanted a simple model that could be flown almost anywhere. Tom looked at the Parlor Mite and decided that something a little smaller would be good so he built his first Micron. A few other guys built similar models – they averaged the weight and came to a minimum of .015 oz (.43gm). They could be flown in the average living room and came to be known as Living Room Sticks or Mini Sticks. In 1990 Tom met up with Mike Colling from the UK who organised an International postal contest and the popularity grew from there.

2000 **F1M** – In 1997 a new class was proposed to help newcomers ease into the more complex F1D class. 45cm span, 3gm minimum weight and maximum 1.5 gms of rubber, otherwise a pretty open specification.

2000 **Gyminnie Cricket** – This is an outright (UK only) beginners model of about 15” wingspan, available in kit form with a simple plastic propeller. The competition variant has a minimum weight of 3gm - flying surface outlines and MS/tailboom lengths should be the same as the original. A built up solid sheet propeller can be used. Once again it has remained a firm favourite and is unchanged from its original form.

In 2011 the **F1R** class, previously known as 35cm, came of age (over 50!) with its recognition as an International class. I think this must be the longest surviving model class specification; nothing has really changed since its inception at the 1959 Hungarian contest. The rules are the simplest imaginable; it should have a projected wingspan of less than 35cm, anything else goes. Wonderful! Beware though - local rules sometimes state microfilm is not permitted.

Take a look at the Millenium Dome history, this relates the current record holding flight by Bob Bailey (UK).

In fact this model takes me personally back full circle, I flew a 35cm microfilm model – a design by Lief Englund - it might even have been his 1959 contest winning model – in the school gym in hmmm, I’d say 1961 maybe 62. Great fun, though it was heavy, probably used a simple rubber band for a motor and flew for about 1 minute..... how things have changed!

Acknowledgements:-

“A Century of Indoor Models” by David Erbach.

Available on-line at:- [**http://csweb.wku.edu/~david.erbach/IndoorCentury/**](http://csweb.wku.edu/~david.erbach/IndoorCentury/)

“The Indoor Model ” by Bill Tyler c1946.

Reg Parham’s indoor archive from Bob Bailey.

Tin Hayward-Brown for all of the information in the Australian history section.

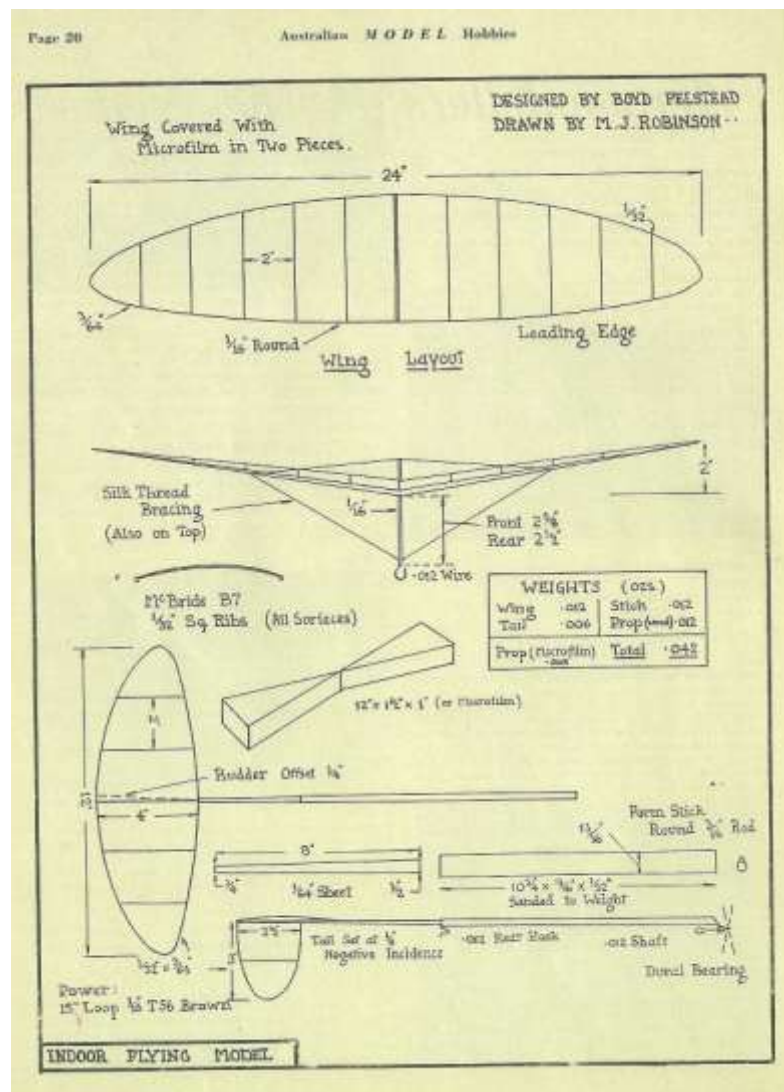
INAV magazines from 1961 to present day.

Available on-line at:- [**indoornewsandviews.wordpress.com**](http://indoornewsandviews.wordpress.com)

Indoor Duration in Australia 1949 to present day.

The following account has been compiled from information supplied by Tim Hayward-Brown, Australian World Championship team member in 2012 and 2014.

In July 1949 Boyd Felstead published the plan below in Australian Model Hobbies magazine together with an article describing how the model was built. At that time the world record was about 28 minutes held by Frank Cummings (USA). Few people in Australia flew indoor duration as there were very few places large enough to accommodate them – nothing new there then!

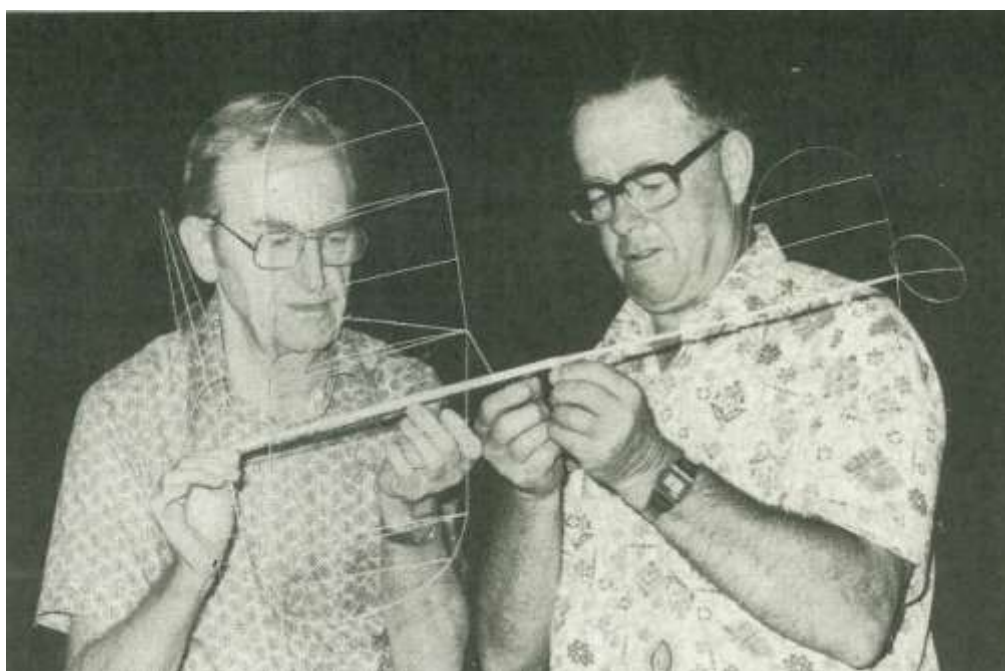


In 1950 the Australian "stick" record was 14 minutes plus set by Bert Halmshaw in the Centennial Hall, Adelaide, Boyd held the "fuselage" model record at 12min 36 seconds.

Shortly afterwards Boyd retired from indoor flying for about 20 years and very little happened in the Australian indoor duration scene during that time. His interest was awakened in the early 1970s returning for the Strathalbyn S.A. Nationals, he then built new models and had them flown by proxy in the 1972 and 1974 (Lakehurst, USA) World Championships. I simply can't imagine shipping large

microfilm models halfway around the world, brilliant. Boyd noted at the time that he had all the work and the proxy fliers had all the fun! In 1975 with the next 1976 World Champs to be held in Cardington, UK, Boyd decided he would have the fun himself on this occasion. Of course with other Australian flyers now vying for places (notably Helen and Dave Tongway) qualification was now necessary. This was to be decided at the Australian Nationals in Loxton which was to be held in a new venue – a basketball court. This proved to be a duration flyers nightmare, many hanging lights on chains and an 18” gap all round the court between the walls, the roof and the great outdoors! Boyd did win the event but at high cost – he lost (damaged) 4 out of 5 models. At this time there were no steering poles or balloons – the way to rescue a hung-up model was to attempt to blow it down with a fan which usually succeeded but microfilm confetti was also often the result.

However some good was to come of all this, local publicity resulted in Boyd receiving permission to use the Centennial Hall in Adelaide for a record attempt. A little nervous as he only had one complete model following the smashnals with assistance from Gordon Burford (below right) and 2 FAI observers the attempt proceeded. The first flight flirted with disaster as the model drifted into a side wall and hung up on bracket requiring a ladder rescue, subsequent flights steadily improved the time until by the end of the day the new Australian record stood at 18mins 53 seconds, a 4 minute plus improvement over the old one. I do not have details of the ceiling height of the hall.

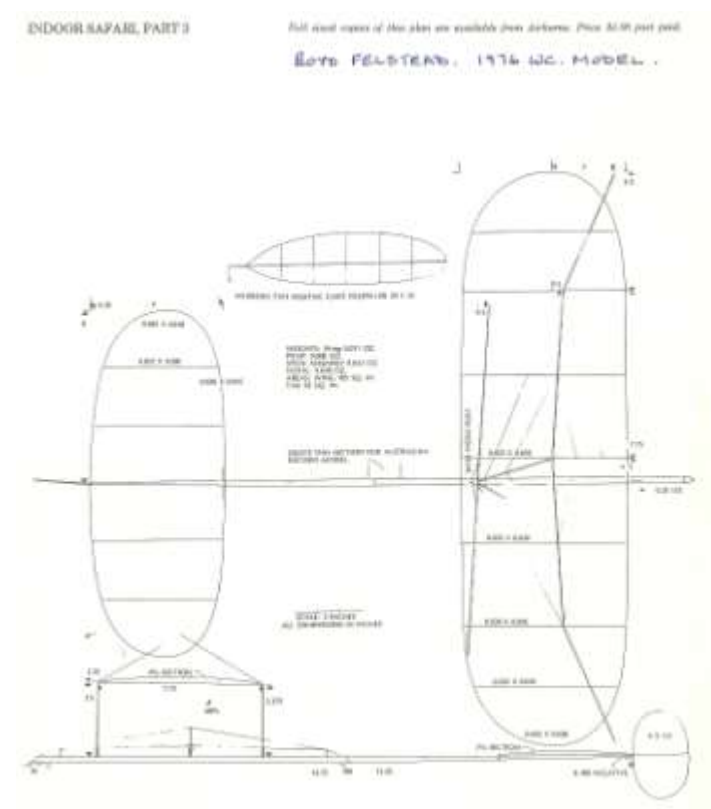


1976 World Champs in Cardington airship hangars, UK.



Boyd Felstead was the lone Australian team member.

Here he is seen readying his model for a flight, a copy of the plan is shown below.



1984 World Champs in Nagoya, Japan.

In preparation for this event 2 team members had been allowed the use of the Victoria State Library reading room and made the first 30min + flights in Australia.

This was the first World Champs where Australia had fielded a full team, as well as a team manager and 2 helpers. The team comprised Boyd Felstead, Richard Blackam and David Ker, all performed well ending up in 9th position and ahead of the host country! The USA made a clean sweep of the event with Jim Richmond posting a 39:52 flight with his “Flim Flam” design and Variable Diameter prop.

December 2011.

The first indoor team selection trials for over a quarter of a century were held in December of 2011, resulting in a 2 man team, comprising Tim Hayward-Brown and Max Newcombe, being selected to represent Australia in the 2012 World Champs in Belgrade, Serbia.

ORIGINAL



Tim Hayward-Brown (left) and Max Newcombe (below).



September 2012 World Championships, Belgrade, Serbia.

This is where I first met Tim and Max - Tim had come off his bike just before travelling, receiving slight concussion and was still in a bit of a state - didn't take a photo unfortunately but it didn't seem right at the time! This was their first opportunity to fly in a high ceiling venue and both performed well with Tim coming out on top but not challenging the leaders yet.

March 2014 World Championships, Slanic Prahova, Slovakia.

Both Tim and Max have again qualified for the Australian team but unfortunately due to a number of personal reasons Max has had to decline.

Needless to say I'm looking forward to catching up with Tim again.

