THE HANGAR PILOT

ECLECTIC

MIAMI INDOOR AIRCRAFT MODEL ASSOCIATION — MIAMA

23RD YEAR OF PUBLICATION
INDOOR ISN'T FOR EVERYONE

ISSUE 164

- RESULTS, MIAMA MEET 6
- TWO PISTACHIOS - MODEL OF A MODEL PUSSYCAT + LINSTRUM'S HI-MAX SCALE
- SEVERAL INTERESTING MODELS WORTH MODELING

NEXT MEET: MIAMA FINAL MEET #7
MAC DILL AFB MAY 14-15 FAC MASSIVE RACE-PLANES



1989 RENO AIR RACES by David Wells

①



"LIKE A LETTER FROM HOME." Whelan

THE HANGER PILOT

The Hanger Pilot, edited by John Martin Jr., who is solely responsible for its content, is published 8 or 9 times a season for bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association) - AMA club 986. One of two active all indoor free flight clubs in AMA. For a mere $12.50 you will receive all of the published issues that year. We encourage reader contributions because, frankly, we need the material. Letters, plans,]-views, complaints, gripes and compliments to: Dr.John Martin Jr., President / Editor, 2180 Tigertail Ave., Miami, FL 33133 USA. phone: 305-858-6363.

MEET #6 APRIL 16,17 C.D. DAVE LINSTRUM RIDES IN A KITFOX!

Sun 'n Fun '94 Lakeland & MIAMA Macdill: Dynamic Duo!

While Doc was off at a wedding (not his!) CD Dave Linstrum delegated the start so he could attend the Sun'n Fun Fly-In at Lakeland Airport. This was great. $15 got me a flightline pass so I could see all the homebuilts and warbirds AT entrance, along with a big Kitfox display and tent. I talked to Sales manager about MAL Kitfox Pnut kit- he wants to put it in the factory catalog! I also angled a ride which was operating out of the ultralite area. This was the thrill of a lifetime. also had the Kitfox Vixen on display- I may build one as a NoCal.

I arrived at Hangar Three MacDill just in time to conduct the Pnut mass launch. Doc, we did not miss your unbeatable Goldwing at all! Despite the many Beech planes the hangar seemed roomy without the Presidents Plane and security cordon. I had frustration trying to get the right motor sizes for my Embryo and Mini-Stick. Hung in wires along a girder, where no balloon could dislodge it. Fine with me- it only seem to get extremes- no climb or too much, the last resulting in bashing!

New face Ray Alonzo (Trivin protege) had a nice Parlor Mite mini-stick and Trivin's P28. The turnout was on the light side, with Eldon Williams back with his Miles Pnut Choate had a great looking Pottier Pnut and Bill Criss, with some help from Obarski- his personal best- 5:06 with his Biscayne Baby Mk I. Now maybe he will build one!

The FAC Golden Age Mass Launch was also a sellout crowd- 8 flyers in a comic! My ancient 1936 Megow Puss Moth was bested by Nunez and Brimmer. see results High Humidity and heat made for a sweaty but fun contest.

Ask me about my KITFOX

NEXT MEET:-MIAMA MAY 14-15 MACDILL

ALWAYS CALL INDOOR HOT-LINE FRI NITE 1-305-858-6363

Sun 'n Fun '94

ONE DAY Registration

SUN 'N FUN EAA FLY-IN
Lakeland, Florida

(2)

MEMORIES OF MACDILL MIAMA MEET 4/16 & 17 1994 by the CD

While there were only 15 flyers (Ghost Squadron, where are you when we need you?) there was certainly plenty of action, with intense competition for the top gun spot in several events. Popular Mini-Stick is a good example: flyers were trying new batches of Tan II and breaking motors (you can barely hear the snap) trying to get that extra few seconds- or just climb! We all missed Barker, Wells and Doc, but the rest of us packed in the turns. Diligence was the key word-Bill Criss had his rear wing post pull out three times during climb before he thickened it with glue. Then he got his best ever 5:06 with Obarski instruction.

The Peanut and Golden Age Mass Launches were popular (8 flyers each) but Coconut was only one round, with Schlesinger pitting his Hi-Max against VTO's Zippy. Cmon, guys, bring out your Coconuts! These majestic giants are NOT dinosaurs!

Ric Choates' French Pottier 110 Peanut was a low wing beauty in white wit gorgeous jam-molded acetate bubble canopy. He was frustrated by trimming, but it has potential. The French plans, from Vol Libre, gave motor data only in grams-not rubber size. Sid Gilbert had a nice airbrushed yellow Fike E with lots of detail.

Nunez led the way in Pistachio with his incredible airbrushed craft, WW I and Golden Age. Brimmer's Hi-Ho, recovered from a hang-up last month, nosed out VTO's Baxter Pussycat (from MB Centerfold) in Model of a Model. Pussycat-it's simple, big & slow-flying...

Trivin deserves kudos for rescuing many a hung model for others- he says the club has more than enough helium so **bring your balloons to last meet May 14 & 15!!**

MIAMA MEET #6 1994

AMA PEANUT SCALE

1.Don Brimmer MO-1 on Floats	92.1	:54	:48	147.1
2.George Nunez Ol' Ironsides	96.4	1:35	-	143.9
3.Bill Criss Fike	70.0	:45	:56	120.5
4. Walt Schlesinger Cougar	80.0	:34	:37	116.5
5. E.M. Thomas Martin MO-1	80.0	:33	:30	111.5

FLYING ACES SCALE

1. George Nunez Aeronca K	62.5	1:26.3	135.6
2.Don Brimmer Lep Moth	57	:57	114
3.Sidney Gilbert Martin MO-1	57	:47	104
4.W.Schlesinger Lep Moth	54	:40	94

FLYING ACES NO-CAL

1.W.Trivin	Farman	4:19
2.Tom McCoy	Fike	3:14
3.S. Gilbert	Finnair	2:47
4.Carl Hedley	Zero	2:11
5.Don Brimmer	Zero	:51
6.W.Schlesinger	Avia	:39

FLYING ACES EMBRYO ENDURANCE

1.Sidney Gilbert	Hornet	366
2.Carl Hedley	Canard	350
3.Earl Thomas		284
4. D. Linstrum	X-Y Chromosome	227
5. Don Brimmer	Pink Pup	223
6.W.Schlesinger	12½¢	135

MIAMA PISTACHIO

	Plane	Stat.	Pt.	Fly	Pt	Total
1.Geo. Nunez	Nieuport ND-42	1		:50.1	2	3
2.VTO Linstrum	Komet	2		:58.3	1	3
X.Geo. Nunez	Sopwith tripe	1		:41.5	3	4
3.Don Brimmer	Andreason	2		:36	5	7
4.Sidney Gilbert	Fike	3		:39.3	4	7

AMA BOSTONIAN

1.Sidney Gilbert	7-Up	1.12	328
2.W. Trivin	Living Colors	1.12	245
3.Carl Hedley	Basic Bost,	1.10	203
4.D.Brimmer	Pink	1.12	127
5.W. Schlesinger	Basic B.	1.10	91.3

MODEL OF A MODEL

1. Don Brimmer	Buzz Bug	1:10
2.Dave Linstrum	Pussy cat	1:05

AMA EASY B

1. Wayne Trivin	14:17
2. Dick Obarski	10:46
3.Ray Alonzo	9:13

MIAMA MINI STICK

1.Dick Obarski	7:45
2.Wayne Trivin	7:43
3.Ray Alonzo	5:45
4.Bill Criss	5:06
5.Charlie Johnson	4:52
6.Dave Linstrum	3:39
&.Eldon Williams	2:25

AMA NOVICE PENNY

1.Wayne Trivin	9:15
2.Charlie Johnson	8:06
3.Ray Alonzo	7:52
4.Eldon Williams	6:39

MIAMA COCONUT

1.Dave Linstrum	Zippy	1:26
2.Walt Schles.	Hi-Max	:26

MASS LAUNCH EVENTS

FLYING ACES GOLDEN AGE
1.George Nunez Aeronca
2.Don Brimmer Lep.Moth
3.D.Linstrum Puss Moth
4.W.Schlesinger L.Moth
5.C, Hedley Taylor Cub
6.Ric Choate MO-1
7.Sidney Gilbert M)-1
8.E.Williams Miles M-18

MIAMA PEANUT MASS L.
1.George Nunez Turbo Beaver
2.Sidney Gilbert Lacey M-10
3.Bill Criss Fike
4.W.Schlesinger Cougar
5.Carl Hedley T. Cub
6.Don Brimmer Lemberger
7.E. Williams Miles

COCONUT MASS LAUNCH
1.Dave Linstrum Zippy
2.W.Schlesinger Hi MaX

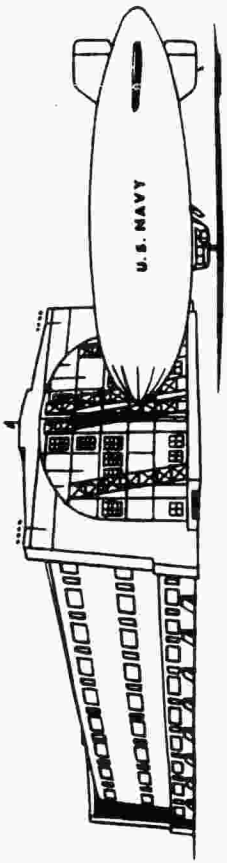
MIAMA DIME SCALE

L.Dave Linstrum	Puss Moth	2:25
2.G.Nunez	Consolidated BT-7	2:11
3.D. Brimmer	Great Lakes	1:56
4.W.Schlesinger	Nieuport 17	1:26

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NAVY LAKEHURST
HISTORICAL SOCIETY

P.O. BOX 328 • LAKEHURST, NEW JERSEY 08733





Black Dog was another "airship" canine in Naval Aviation. He served 13 years, grabbing ground lines used to control the takeoffs and landings of Navy balloons and blimps. His devotion to airships and the men who kept them flying is legend among the veterans of LTA (lighter-than-air). His service during World War II and 12 years thereafter is immortalized on a plaque at the "Home of LTA," Naval Air Station, Lakehurst, N.J.

During his turbulent career Black Dog served at four different air stations, won the "Quarter Wing" of LTA, got his leg entangled in a handling line and hung suspended from an aircraft for over an hour before being rescued, and was awarded "Top Headline Maker of the Day" by a radio station. He had his decaying teeth pulled at the dental clinic and possessed a service record, filed with the records of the men in the airship squadron.

Black Dog's history dates to 1944 when the little mongrel became attached to the men of Airship Utility Squadron Detachment based at Fisher's Island, N.Y. He received his Quarter Wing after flying the minimum required hours. He served with Airship Patrol Squadron 12 (ZP-12) and in ZP-2 at South Weymouth, Mass., Glynco, Ga., and Lakehurst. Black Dog assisted the ground handling crews in manning the takeoff and landing lines of the Navy's airships. He was usually the first to retrieve, in his teeth, one of the ropes used to help guide a blimp to a landing and the last to relinquish the line on takeoff. The end man on the line invariably felt the tug and heard the growl of Black Dog, whether it was day or night, rain or shine, sleet or snow. To some, he was a nuisance; to most, an amusement.

Blackie was once struck on the back by a ship which took a deep dip after takeoff and was rushed to the vet. Another time the tip of his tail was clipped by a whirling propeller.

One night in 1955, as a hurricane was gathering force, an airship took off with a line entwined around one of Black Dog's hind legs, lifting him with the blimp. With the ship's searchlight, the pilot discovered the dog, dangling head down, flying through the night air. The pilot requested permission to return to the base and made a low, slow pass over the field where waiting crewmen grabbed Black Dog, more dead than alive. He had been airborne upside down for an hour and seventeen minutes. He spent two months in the animal clinic. Station WSB of Atlanta awarded him "Headliner of the Day" on its five star final newscast.

Black Dog slowed down a bit after Navy dentists had to remove his teeth, weakened with age and years of rope tugging.

Today, in Hangar Five at Lakehurst stands a headstone inscribed: "Black Dog, 1939-1957, A Good Shipmate."

HEAD STONE WENT TO DALLAS WITH OTHER VADM ROSENDAHL'S MATERIAL - HJA

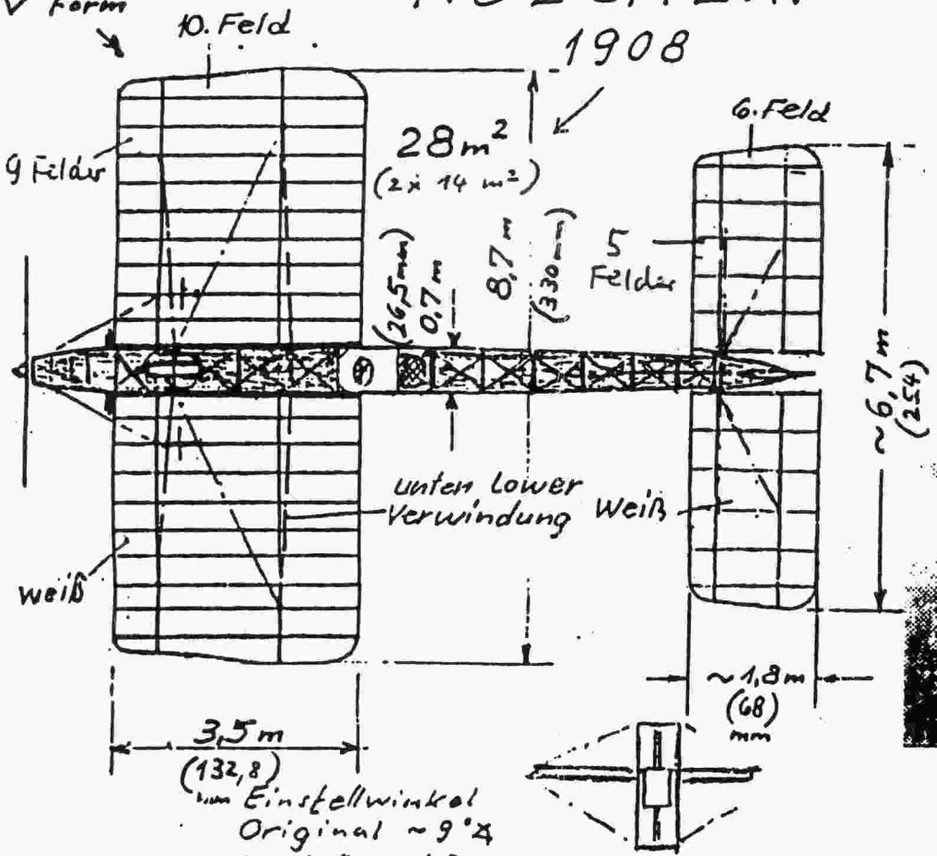
ISS: (11)

Französischer Eindecker

KOECHLIN 1908

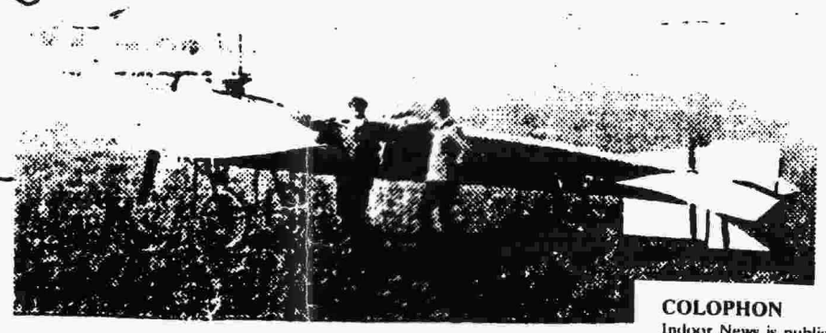
Original keine V Form

1. 2. 3. Platz in Frankreich von Pierre Olivier Perrier mit Peanut KOECHLIN



Daten

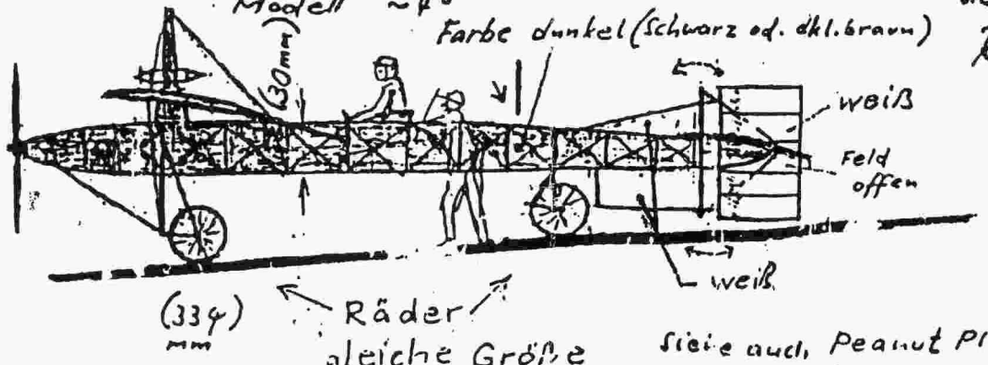
Span 8,7m Wing Tiefe 3,5m
F 28 m²
Long = unknown
Motor 17-25hp. Dutheil-Chalmers Boxer 2Zyl. 125x120
Flügeltiefe 3,5m!
Gewicht = 350kg

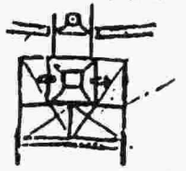


Pischof und Köchlin (1908).

de Pischof und Köchlin 1908

Rekonstruktion M1:100





B.G. Sabel
2.6.85 ©89
Index ⓐ 30.3.92
ⓑ 20.4.93 Frankfurt/M

IDEAL für Elektro-Motor
MABUCHI FF-N20PA-13115
5,2g

Siehe auch, Peanut Plan M1:26,3536 von B.G. Sabel
Vol Libre u. Peck-Polymer

Peanut Abmess. in ( ) mm

KOECHLIN 1908 Revised (4)

PLANES WORTH MODELING FROM INDOOR NEWS

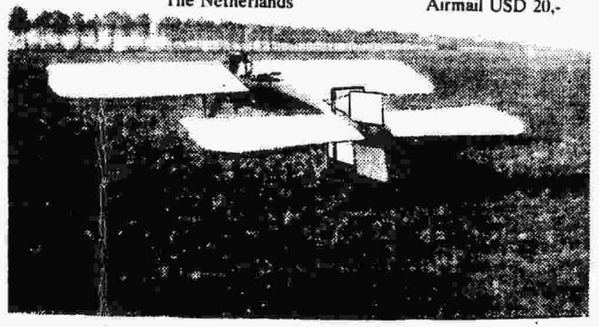
by Benno Sabel (GER)

Benno published a wonderful plan of this airplane in Vol Libre 64. But recently he discovered an unknown photograph which showed that modifications are necessary. The wing should have 9 rib fields and the tail span has to be increased with one field. See plan for further details.

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L'aéroplane de Pischof-Koechlin

COLOPHON

Indoor News is published at least four times a year and covers all types of indoor models, from peanuts to microfilm. Texts can be sent in Dutch, English, German and French (I can read the latter two, but not write them). Please type your texts on 12,5 cm width. Texts can be sent on floppy disk (3½ or 5¼) in Wordperfect or ASCII format. I can make the drawings, if you are no draftsman. I prefer payment of subscriptions per six issues. Paying by Eurocheque, Postal Money Order or sending bank notes is free of handling charges to the recipient. Please bear the handling charges yourselves when paying by Eurogiro or with foreign cheques. The Eurogiro account number is 4406860.

THIS IS FROM INDOOR NEWS INTER-SCALE SPECIAL ISSUE SEPT. '93. ENTIRE ISSUE WAS INDOOR SCALE.

BE AT THE LAST MIAMA MEET OF THE SEASON

MAC DILL MAY 14, 15!

(5)

Vintage Indoor Flying

-Dave Larkin

In the early 50s when I started serious aeromodelling, my club (Eastbourne MFC) suddenly got keen on indoor flying. Now we didn't have access to spacious school gymnasiums so we had to make do with what we did have - a small meeting hall once a month for the club meetings. Dan thought this article would be about electric-round-the-pole, but it isn't. That did exist then, Aeromodeller had developed it for the Dorland Hall shows, but what we we did was more prosaic, at least at first.



This was the time when Keil Kraft had introduced a huge range of small scale kits, all for three shillings and eight pennies mostly rubber powered. There was a good mix of civil and military designs. Shortly afterwards they were joined by models designed for the Jetex 50. Not surprisingly, the whole range were called the three and eightpennies.

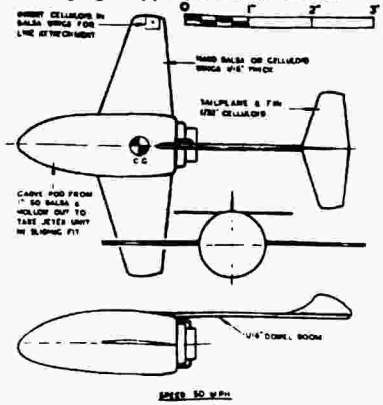


None of these models flew particularly well out-of-doors. The kind of rubber-powered scale flying one sees at Geneseo was, to my recollection, well beyond our understanding or even our imagination. But, on about an eight or ten foot line, round the pole, they went quite well. Soon we were timing each flight and records were being established. This was when things got really challenging. Each meeting brought out new masterpieces and better performances. Then Don Panteney turned up with, I think, a Beech Bonanza with return gears. It established a whole new level of performance. Between the thirty or so club members I'm sure every model in the range was given a chance to fly at these meetings.

But what followed was devastating. Avro were filling the sky with tiny bright coloured triangles, called the 707 series - fore-runners of the 698 Vulcan bomber. Could one of these strange devices be made to fly round the pole? I made a profile version from the 1/72 plans and flew it did. Characteristically it started off slowly at a relatively high angle of attack than kept accelerating until, by the time the 10 seconds fuel of its Jetex 50 was spent, all one could see was a red blur and a wildly oscillating pole. Next month others followed and air pollution in the club room was a reality. Even worse were the occasions when a floor impact knocked the motor loose and it hurtled invisibly around the room like some supersonic and infuriated red hot wasp. We even tried using solid scale kits, the Veron ones were made from balsa then (not really indoor quality), and I remember my V-tailed Supermarine 508 which went quite well. A built-up De Havilland Venom (successor to the Vampire) was a success and even ROG'd when the 50 unit was replaced by a 100.



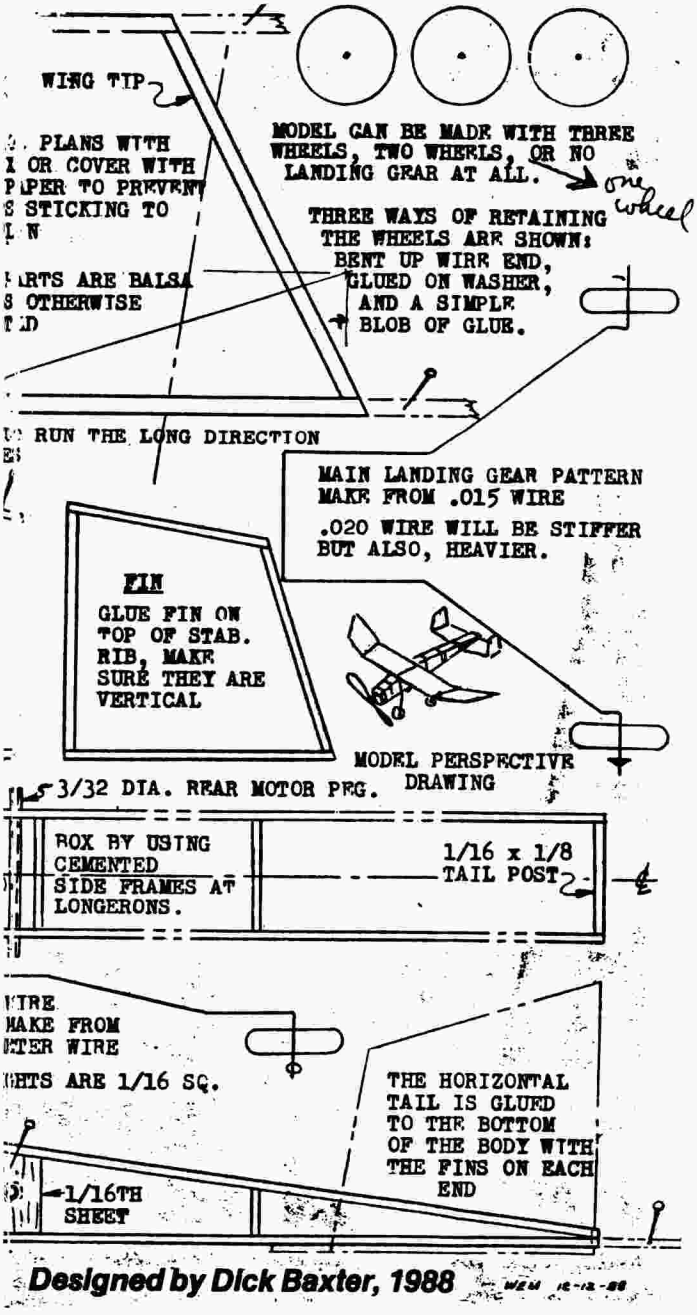
By the time the last winter meeting was held I had really gone too far, and turned up with a Fairey Junior fitted with a Kalper diesel. Notice I say fitted - I never ever got it to go, though it extracted more blood than the rest of the engines I have owned since. Perhaps it was just as well that summer came along and winter indoor flying stopped, never to return.



TYPICAL LAYOUT FOR JETEX 50 R.T.P. SPEED MODEL

Plan from Aeromodeller February 1953

FROM DAN O'GRADY SAM '86



JOHNSON CITY - HERE WE COME! (6)

I've received a copy of the proposed indoor schedule for the U.S. Indoor Championships slated for Johnson City, June 2nd-4th, 1994.

This will be a 3 day meet by virtue of the AMA Nats (including indoor) being held at Lubbock TX in July.

The AMA will not be contributing any monies to the USIC and therefore the USIC needs a maximum of participation.

If you've been toying with the idea of going to Johnson City this is the year to do it! You won't fail to enjoy yourself. You don't have to be an expert to fly at Johnson City. Although they (the experts) are there too, there are a horde of ordinary everyday indoor flyers who are there to enjoy the high ceiling and perhaps to improve on their own personal goals. There's a great deal of enjoyment to be had at Johnson City. Enter an event just for the fun of it. You'll have a blast!

Because of the limitations on flying time certain low participation events have necessarily been omitted, namely: Helicopter, Autogyro, "A" ROG and 35 cm Stick.

Accommodation is available on campus. Rates are to be $25/night for 2; $37.50/night for rooms for 3 persons, and $23/night for a single person room. Some have private baths or share adjoining baths. The contest managers (as opposed to the University) will be responsible for the reservations and collecting the money. There will be no linen furnished or available.

There is an extensive range of motels at reasonable prices within a short distance of the Dome, and local restaurants have excellent food at very reasonable prices.

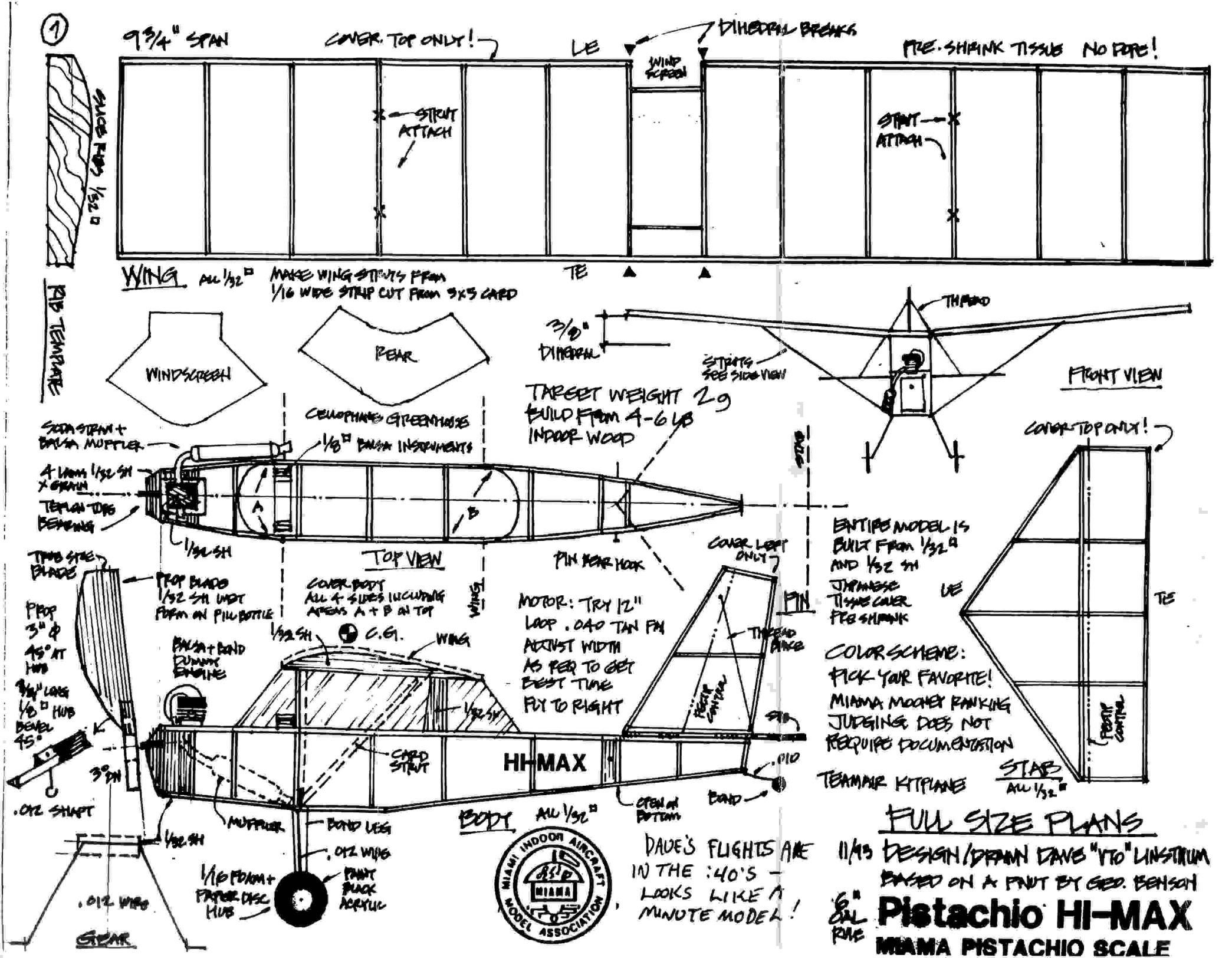
Again, because of time restrictions, there will be no Banquet. There are tentative plans to have an on-site BBQ much like the bean-feeds that SAM have.

Unlike previous years, there will be no flying in the Mini-Dome prior to the first day of the meet.

There was a problem in the proposed USIC schedule in that Intermediate Stick and EZB (as well as Ornithopter) were scheduled for the same 6 hour period on the first day. To those who fly either (or both) of these events this time is inadequate. EZB in particular is very popular and competing for airspace with Intermediate Sticks would not be greeted favourably by either groups.

At the same time F1D which has few participants had 13½ hours in the schedule. A schedule alteration has been made to correct this situation, and Phil Klintworth has provided a 10 hour period for EZB and Intermediate Stick. Phil says that the flyers will have a chance to decide whether to fly the events together or split them.

FROM DAN O'GRADY, SAM 86


9 3/4" SPAN
COVER TOP ONLY!
LE
DIHEDRAL BREAKS
WING SCREEN
PRE-SHRINK TISSUE NO FORE!
STRUT ATTACH
STRUT ATTACH
SLICE RIBS 1/32 □
WING ALL 1/32 □ MAKE WING STRUTS FROM 1/16 WIDE STRIP CUT FROM 9X5 CARD
TE
RIB TEMPLATE
WINDSCREEN
REAR
3/8" DIHEDRAL
THREAD
STRUTS SEE SIDE VIEW
FRONT VIEW
TARGET WEIGHT 29
BUILD FROM 4-6 LB INDOOR WOOD
CELLOPHANE GREENHOUSE
1/8 □ BALSA INSTRUMENTS
SCRAP STRAW + BALSA MUFFLER
4 LOOPS 1/32 SH X GRAIN
TEFLON TUBE BEARING
1/32 SH
A
B
TOP VIEW
PIN REAR HOOK
ENDS
COVER LEFT ONLY
PIN
MOTOR: TRY 12" LOOP .040 TAN FM ADJUST WIDTH AS REQ TO GET BEST TIME FLY TO RIGHT
THREAD BRACE
FUSE SIDE VIEW
STB
.010
BAND
OPEN at BOTTOM
ENTIRE MODEL IS BUILT FROM 1/32 □ AND 1/32 SH JAPANESE TISSUE COVER PRE SHRINK
COVER TOP ONLY!
LE
TE
COLOR SCHEME: PICK YOUR FAVORITE! MIAMA MOCHER RANKING JUDGING DOES NOT REQUIRE DOCUMENTATION
TEAMAIR KITPLANE
STAB ALL 1/32 "
TYMO STICK BLADE
PROP BLADES 1/32 SH WET FORM ON PILL BOTTLE
PROP 3" Ø 45° AT HUB
3/16" LONG 1/8 □ HUB BEVEL 45°
.012 SHAFT
3° DN
1/32 SH
COVER BODY ALL 4 SIDES INCLUDING AREAS A + B ON TOP
WING
C.G.
BALSA + BAND RUBBER ENGINE
CARD STRUT
HI-MAX
MUFFLER
BOND LEGS
.012 WIRE
1/16 FOAM + PAPER DISC HUB
PAINT BLACK ACRYLIC
.012 WIRE
GEAR
BODY ALL 1/32 □
DAVE'S FLIGHTS ARE IN THE :40'S — LOOKS LIKE A MINUTE MODEL!
MIAMI INDOOR AIRCRAFT MODEL ASSOCIATION
MIAMA
FULL SIZE PLANS
11/93 DESIGN/DRAWN DAVE "YTO" LINSTRUM
BASED ON A PNUT BY GEO. BENSON
6" SCALE
Pistachio HI-MAX
MIAMA PISTACHIO SCALE

CHECK OUT THIS CALIFORNIA FLYING SITE

ONLY IN FLORIDA

A Floridian reports: "A young couple parked their van near the entrance of a restaurant. She set up a 'Valet Parking' sign. He told the boss from the first [illegible] of a Mercedes [illegible] is driver [illegible] the van, over to the Mercedes. Good!

Dress Up That Scale Ship by Stan Fink is a new 25 page booklet which explains 8 ways to beautify stick and tissue scale models. It is for beginner and advanced modelers and has 8 illustrations and 2 charts. It is the only book of its kind in our hobby. The cost is $10 ppd. ($12 Foreign).

please make your checks payable to Stan Fink, 1810 Pine St., Phila., PA. 19103.

(9)

PIN PARTS DOWN BEFORE ASSEMBLY REMOVE EXTRA WOOD AFTERWARDS

A JIG IS SIMPLY A SUPPORT TO HOLD UP THE WING TIP WHILE THE DIHEDRAL JOINT IS DRYING

DIHEDRAL BREAK IS JUST OUTBOARD OF RIB

LEFT WING TIP

DIHEDRAL JIG LOCATION JIG IS 5/8 HIGH

DIHEDRAL IS 1.10 AT EACH TIP

WING OUTLINE 1/16 x 1/8

THERE ARE THREE RIBS, ON THE CENTERLINE

WING

COVER TOP OF WING ONLY

SKEWED RIB GIVES THE REQUIRED WASHOUT

TRAILING EDGE

LEADING EDGE

RIBS 1/16 SQ.

TOP VIEW

COVER FLYING SURFACES ONE SIDE AS NOTED:
a. WRINKLE PAPER
b. DON'T SHRINK
c. DON'T DOPE

USE A 5 OR 6 INCH DIA. NORTH PACIFIC PROP. OR EQUIVALENT

WING TIP

PLANS WITH OIL OR COVER WITH WAX PAPER TO PREVENT PARTS STICKING TO THE PLAN

ALL PARTS ARE BALSA UNLESS OTHERWISE NOTED

MODEL CAN BE MADE WITH THREE WHEELS, TWO WHEELS, OR NO LANDING GEAR AT ALL.

one wheel

THREE WAYS OF RETAINING THE WHEELS ARE SHOWN: BENT UP WIRE END, GLUED ON WASHER, AND A SIMPLE BLOB OF GLUE.

TISSUE COVERING CAN BE ATTACHED WITH THINNED WHITE GLUE AND A BRUSH , OR WITH A PASTE STICK

THE WOOD GRAIN DIRECTION SHOULD RUN THE LONG DIRECTION IN ALL WOOD PIECES

FIN

COVER FINS ON OUTSIDE ONLY

NOTE ASYMETRY FOR TURN

STABILIZER

FIN AND STABILIZER OUTLINES ARE 1/16 SQ.

TRAILING EDGE

NOTE GUESET

LEADING EDGE

TOP VIEW

COVER BOTTOM OF STABILIZER ONLY

MAKE SURE THAT THE CENTERLINE ℄ OF BOTH THE WING AND TAIL ARE LOCATED ON THE BODY CENTERLINE.

FIN

GLUE FIN ON TOP OF STAB. RIB, MAKE SURE THEY ARE VERTICAL

MAIN LANDING GEAR PATTERN MAKE FROM .015 WIRE

.020 WIRE WILL BE STIFFER BUT ALSO, HEAVIER.

MODEL PERSPECTIVE DRAWING

NOSE BLOCK TO BE A SNUG FIT IN FRONT END OF FUSELAGE, NOSEBLOCK PIECES 3/16TH. ALUMINUM 3/32 DIA. REAR MOTOR PEG.

1/16TH SHEET

FUSELAGE TOP VIEW

DON'T BUILD A TOP VIEW, JUST USE IT TO GET THE LOCATION AND LENGTH OF THE

1/16 SQUARE CROSSPIECES

MAKE A FUSELAGE BOX BY USING THE CROSSPIECES CEMENTED BETWEEN THE TWO SIDE FRAMES AT TOP AND BOTTOM LONGERONS.

1/16 x 1/8 TAIL POST

PECK POLYMERS PLASTIC THRUST BEARING

3/16 SHEET NOSE BLOCKS

DO NOT COVER FUSELAGE UNDER THE WING

THE WING IS GLUED TO THE TOP OF THE BODY (FUSELAGE) WITH THE TRAILING EDGE AFT.

NOSEGEAR WIRE PATTERN, MAKE FROM .015 DIAMETER WIRE

FUSELAGE LONGERONS AND UPRIGHTS ARE 1/16 SQ.

THE HORIZONTAL TAIL IS GLUED TO THE BOTTOM OF THE BODY WITH THE FINS ON EACH END

1/16TH SHEET

AN 18 INCH LONG LOOP OF 1/8 WIDE RUBBER

NOTE MAKE TWO SIDES THIS PLAN, WHEN GUSSETS DIRECTLY OVER DRY REMOVE AND SEPARATE FROM EACH OTHER RUBBER BAND MAKES A GOOD MOTOR

1/16TH SHEET

USE A WASHER OR A BEAD BETWEEN THE PROP

LANDING GEAR LOCATIONS AND THRUST BEARING

Pussycat

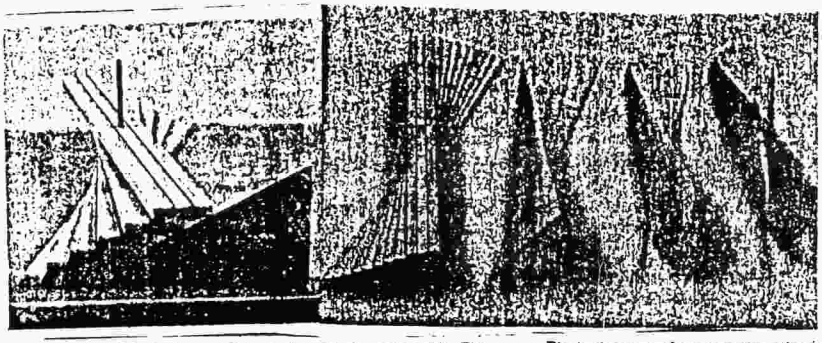
Designed by Dick Baxter, 1988

MODEL BUILDER JULY 1989

THIS REDUCED PLAN OF THE PUSSYCAT FROM JULY 89 MODEL BUILDER MAKES A GREAT PISTACHIO "MODEL OF A MODEL".

FROM AN OLD MODEL BUILDER :

(10)



Stack of 1/8-inch slats on the spindle with tip angle guide. Tip angle of 28° gives a P/D ratio of 1.67. (see chart at end of article).

The basic stages of constructing a laminated slat prop. Finished prop has been fitted with a slot-clutch bearing.

Blade Tip Angle and P/D

ANGLE	P/D	ANGLE	P/D
20	1.14	33	2.04
21	1.21	34	2.12
22	1.27	35	2.20
23	1.33	36	2.28
24	1.40	37	2.37
25	1.46	38	2.45
26	1.53	39	2.54
27	1.60	40	2.64
28	1.67	41	2.73
29	1.74	42	2.83
30	1.81	43	2.93
31	1.89	44	3.03
32	1.96	45	3.14

FOR CO2 USE HARD BALSA & 30 MIN EPOXY TO LAMINATE (TRY ADDING A LITTLE BROWN FLOQUIL THINNED WITH THINNER TO THE EPOXY TO MAKE A DESERNABLE SEAM)

LAMINATED SLAT PROPS

By FRED HALL . . . Borrowing from techniques used in making full-size props, the author presents a step-by-step explanation on how to make your own. The appearance and performance can't be beat.

• This article describes a technique for building a type of carved propeller that was used back in the pioneer days. Very little balsa is used and much less carving is required than with conventional carved props. The result is a strong, helical prop that has visible laminations. Soft, medium, and hard balsa, and even basswood have been used with equal success.

I started building props this way after looking through Bert Pond's 50th Nationals booklet. An illustration showed a pile of slats that pivoted at the hub and twisted until 360 degrees of rotation was covered. This was used to illustrate pitch. I wrote to Bert for his comments. The return letter indicated that the pioneers did indeed build props this way and he offered the following guidelines: "Shape the backside completely and also shape the tips before doing any carving at the front or leading faces."

Bert's first point proved to be very important, because I had problems obtaining undercamber or even keeping the trailing faces flat on those props whose leading faces were carved first. However, the tips have been shaped last with no noticeable problems. Maybe Bert will elucidate on this. The simple blade tip angle technique is used as described in my booklet on indoor flying, and the chart is included in this article. The term P/D is the pitch-diameter ratio of the prop, and is independent of the prop diameter. Setting the tip angle in the manner shown in the photo results in the associated P/D ratio in the chart.

To construct this laminated slat prop, strip some 1/16 sheet to 3/8 inch wide or 1/8 sheet to about 1/2 inch wide. Whatever thickness is chosen, the slats must be wide enough so that the overlap allows adequate stock for the blade after the steps have been carved away. Cut the lengths to the desired diameter. For 1/16 sheet, use nine to twelve slats, and for 1/8 sheet, use six to nine slats, depending on the blade width desired. Stack them evenly and drill a 1/16 inch hole down through the center of the pile. Make the hole true, as this will be the hub.

On the top and bottom slats, draw lines on each side of the hub hole to define the area to remain after rough carving. Place the pile on a vertical shaft (1/16 inch diameter) that is 90 degrees to a flat surface. Spiral the slats (in the proper direction) so the tips make contact with the tip angle guide. Draw lines with a pen to mark the area for gluing on each slat below. This also aids setting the proper angle when reassembling.

Remove all slats (except the bottom one) and do not disturb their order. Paint the bottom slat with full-strength Elmer's glue and place the next slat on top of it, using the ink line to set the proper position. Of course, it is not necessary to have glue on areas not in contact. A cotton swab can be used to remove any glue that squishes out. Continue with the rest of the slats, making sure that they stay glued against each other. As the pile forms, confirm the tip angle using the guide. Allow three or more hours drying time before carving; overnight drying is best.

Carve the trailing faces by removing the steps, then carving up to the lines that define the middle portion. Leave this area uncarved until last. Carve some undercamber into the trailing faces as desired. Round the tips (per Bert Pond) or carve the leading faces next. The prop should look like the rough-carved prop in the photo.

From this point on, the finishing is no different than with any other carved prop. A bit of care is needed when shaping the egdes on a softwood prop as the glued joints are harder than the balsa, and there is likely to be a scalloping effect.

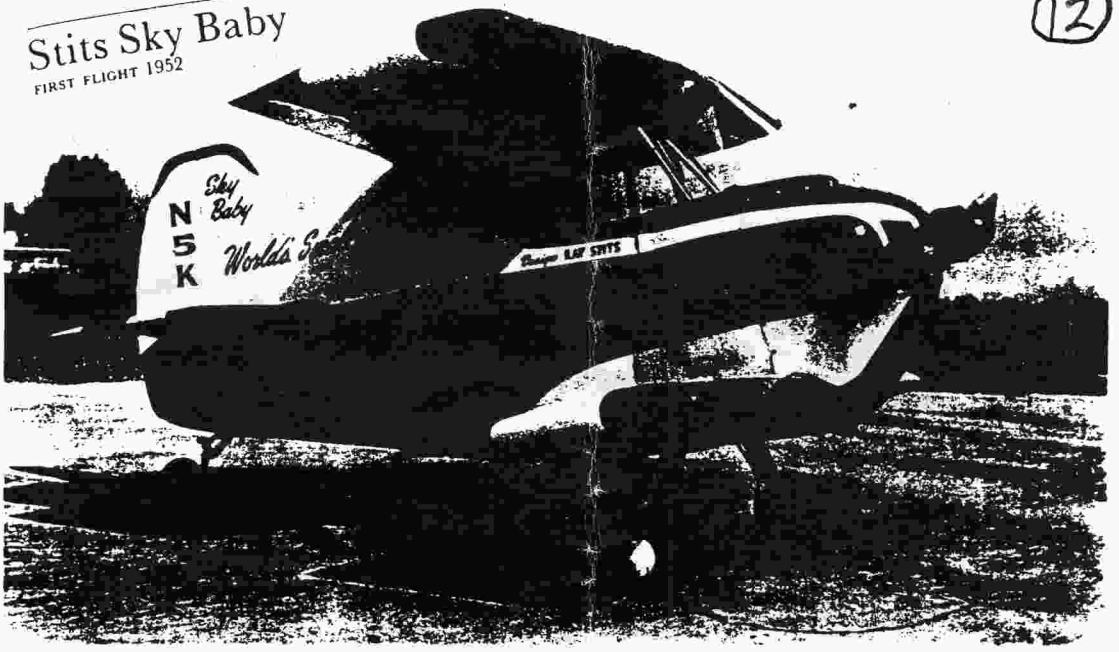
Although this type of prop does not have as deep a hub as other types, some depth may be removed at the hub as shown in the photo of a finished prop. A one-inch or larger sanding dowel is handy for final shaping and smoothing the undercambered area. A small, hand-held piece of fine sandpaper can be used to give the blades a finished look. Depending on the weight needed up front on the model, thinned dope can be used, followed by more concentrated dope with sanding in between. I fit these props with the same slot-clutch bearing illustrated in the indoor booklet.

If mahogany sheet or some other soft, dark wood can be obtained, a more beautiful laminated prop can be made by alternating the dark wood with basswood slats. Sanding bass is a treat if you haven't tried it (ask Fernando). Be sure to put the dark wood at the top and bottom slat positions.

Stits Sky Baby

FIRST FLIGHT 1952

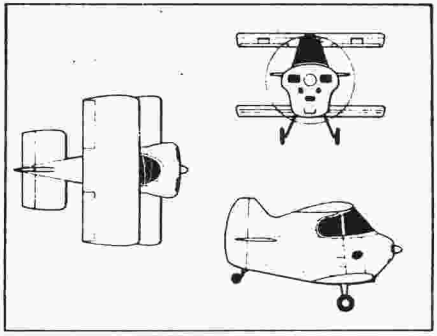
(12)



CALIFORNIAN homebuilder Ray Stits, who was later responsible for the popular Stits SA-3 Playboy and SA-6 Flut-R-Bug designs, built a tiny aircraft in 1948 called the Stits SA-1A Junior. It was a low-wing single-seat monoplane powered by an 85-hp Continental C-85 engine with a span measuring just 2.7 m (8 ft 10 in) from wingtip to wingtip, earning it the title of the World's Smallest Airplane.

Soon after completing this first design, Ray Stits heard that another amateur builder was working at a small aeroplane which would take the title from him by a few inches, so he set to work on a second diminutive single-seater, the SA-2A Sky Baby. The Sky Baby was completed in 1952 at Riverside, California. It was a biplane with wings spanning 2.22 m (7 ft 2 in). A long-armed pilot could sit in the cockpit and almost touch both wingtips with his outstretched arms. It was jokingly noted in contemporary reports that 45 Sky Babies could comfortably have been lined up along the wings of the current World's Biggest Airplane – Howard Hughes' massive Hercules flying boat more commonly known as the Spruce Goose.

The Sky Baby was powered by a tuned 112-hp Continental engine which gave it a maximum speed of 298 km/h (185 mph), a cruising speed of 265 km/h (165 mph) and a landing speed of 129 km/h (80 mph) – very high for a lightplane thanks to the high wing loading of its tiny surfaces. The bizarre-looking Sky Baby did fly, but was only piloted by one man, test-pilot Bob Starr, who was Ray Stits' partner and a highly experienced flier which was extremely fortunate because the midget aeroplane possessed very tricky handling qualities indeed.



The Sky Baby still holds the title of World's Smallest Airplane (indeed it is considerably smaller than many radio-controlled models), but the aircraft no longer flies. It is preserved at the Experimental Aircraft Association's Museum at Hales Corner, near Milwaukee, Wisconsin. Its forerunner, the tiny Junior, also still exists. It is retained by designer Ray Stits in California. Both aircraft were purely experimental and have never been offered to the general public as amateur-built projects, nor has anyone made a serious attempt to devise a smaller practical aeroplane than the Sky Baby.

SA-2A

Type: midget biplane
Maker: Ray Stits, Riverside California
Span: 2.22 m (7 ft 2 in)
Length: 3 m (9 ft 10 in)
Height: 1.52 m (5 ft)
Wing area: 3.39 m² (36.5 sq ft)
Weight: maximum 303 kg (668 lb); empty 205 kg (452 lb)
Powerplant: one 85-hp Continental C-85 engine, race-tuned to produce 112 hp
Performance: maximum speed 296 km/h (185 mph)
Crew: 1
Production: 1

Top: Ray Stits' second (1952) Sky Baby SA-2A, completed in 1952. He was forced to build this biplane to protect his title as designer of the World's Smallest Airplane

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(13) PLANES WORTH MODELING
Submitted by MIKE CONKLING



Prawn (*S1576*) with engine lowered in flight position. (*Alan R. Bedford*)

From BRITISH FLYING BOATS + AMPHIBIANS 1909-1952

Parnall Prawn (1930)

Between the First World War and the early nineteen-thirties the firm of George Parnall and Co. of Bristol were prolific builders of small aircraft for both service and civil use, all of which had names prefixed by the letter 'P' and were designed by Harold Bolas. Most of these machines are well documented, but the Prawn falls into the category of those aircraft on the Secret List which vanished from the scene for various reasons before the ban on information was lifted, and therefore little data can be traced.

The Prawn, completed in 1930, was a single-seater military flying-boat built for the Air Ministry. The smallest British machine of the type, smaller than even the tiny Short Cockle, the Prawn had a parasol, strut-braced monoplane wing, with an all-metal hull and wing-tip floats, the mainplane and tail unit being of wooden construction and fabric covered. The pilot's cockpit lay aft of the mainplane, and was provided with a streamlined headrest. The most



Prawn with engine in take-off setting. (*Imp. War Museum Photo.*)

interesting feature of the Prawn, however, was its unusual power unit arrangement, the engine being a 65 h.p. A.C.–Ricardo–Burt, actually a spare auxiliary engine from the *R.101* airship. Fitted with a diminutive four-bladed propeller of 4 ft 3 ins diameter, the power unit was encased in a metal-cowled nacelle forming a self-contained 'power egg' which was pivot-mounted to a recess in the hull top. For take-off, the whole nacelle could be mechanically canted upwards fifteen degrees to clear the propeller from spray, and when in flight, lowered to the normal position with the thrust line at the top of the bows. A large radiator was mounted on the nacelle, and flexible connections carried engine controls and the fuel supply between hull and nacelle, the fuel tank being positioned externally above the mainplane centre section. Serialled *S1576*, the Prawn was at Felixstowe for testing in mid-1930, but its performance details and eventual fate are not known.

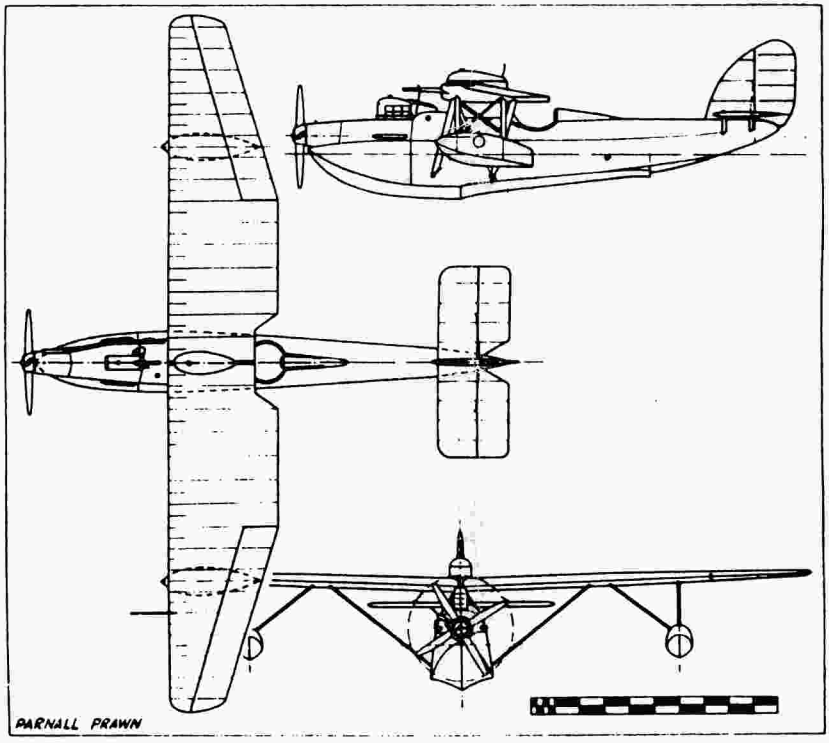
SPECIFICATION

Power Plant: One 65 h.p. A.C.–Ricardo–Burt

Span: 28 feet 5 inches

Length: 20 feet 4 inches

Weight Loaded: 1,100 pounds approx.
No further details available



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Great meet, Jim!
Don

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