EFFETE

THE HANGAR PILOT

MIAMI INDOOR AIRCRAFT MODEL ASSOCIATION — MIAMA — 1985

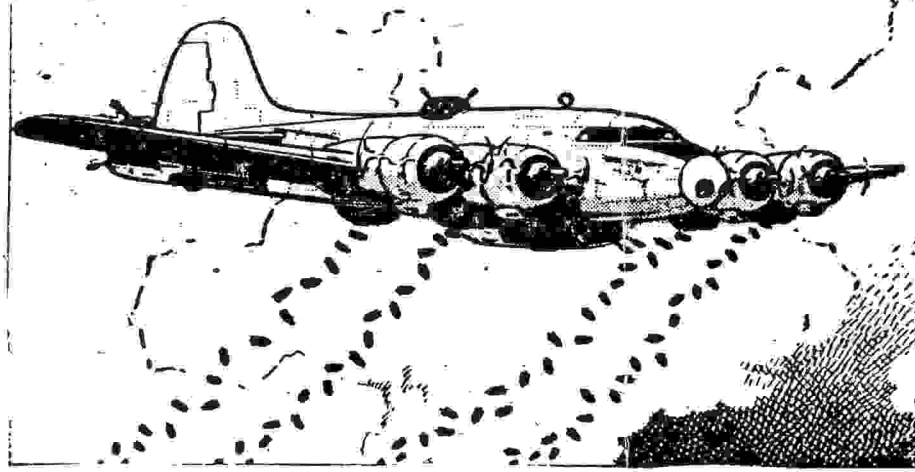
21ST YEAR OF PUBLICATION-
ENTERIAS NON ES
OMNIBUS

ISSUE 145

- KING ORANGE RESULTS
- 3 DOC MARTIN PLANS
- MORE CARBON FIBER STUFF
- AUDACIOUS PEANUTSCALE MIAMA CHALLENGE FROM UPSTART CLUBS.
- HORRIBLE DOUBLE X FOR THOSE WHO HAUE'NT REJOINED !!

NO. 8 IN A SERIES OF ADVANCE RELEASES BY BARNEY BAXTER

The "800-10" HI-SPEED PATH-BOMBER



FACTORY DATA:

CARRIES 800-10 LB. BOMBS CRADLED ON MOVING BELTS IN WINGS AND FUSELAGE.

THESE BELTS SUPPLY A CONTINUOUS FLOW TO FOUR SEPARATE RELEASES---ONE UNDER EACH ENGINE NACELLE.

CAPABLE OF CUTTING A PATH OF DESTRUCTION 60 FT. WIDE BY TWO MILES LONG. EFFECTIVE ON RAILROADS AND MILITARY HIGHWAYS.

TOP SPEED AT SEA LEVEL IS 480 MPH. ENGINES ARE 1500 HP.

NEXT MEET: JAN. 25, 26 US COAST GUARD HANGAR
ST PETE/CLEARWATER FIELD CAT II 9 TO 5
MIAMA MEET 4

FLY DELTA !!



"LIKE A LETTER FROM HOME" - Whelan

THE HANGER PILOT

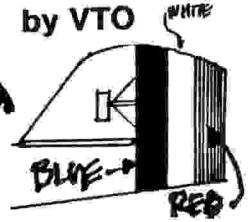
The Hanger Pilot, edited by John Martin Jr., who is solely responsible for its content, is published 8 or 9 times a season for bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association) - AMA club 986. One of two active all indoor free flight clubs in AMA. For a 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, 3-views, complaints, gripes and compliments to: Dr.John Martin Jr., President / Editor, 2180 Tigertail Ave., Miami, FL 33133 USA. phone: 305-858-6363.

THE KING ORANGE - DELTA MEET:

SIX NEW STATE RECORDS in Cat. III were set at the Dec 30,31 meet, with a couple of the records coming very close to national records!. Two great days of flying thanks to DELTA AIRLINES, and CD Rich MacEntee. Also thanks to all you pilots,some of you from great distances, that made the meet super.

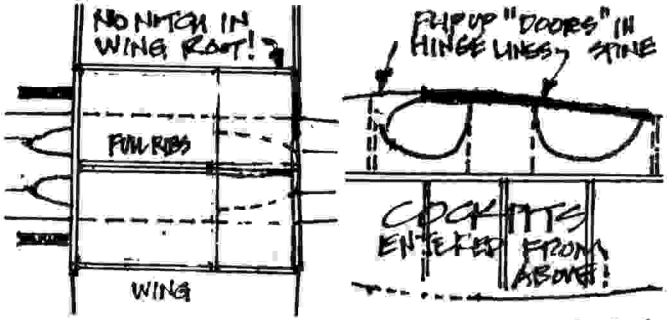
18 entrants made up 66 entries in 18 different events. That's a good showing, even at the NATS.. an average of about 4 entries per entrant. Wayne Trivin beat his own peanut record. Dick Obarski beat Aronstein's record in No-Cal, and also beat Trivin's FROG record. Walt VanGorder got THREE records. He improved on John Voorhees' Penny record,beat Obarski's Easy B record (Set with a torque burner), and beat his own Manhattan record. Ron Ganser erased another Aronstein mark in Bostonian. 44 degrees in Tampa, but nice and warm in the hangar due to the heaters. Lots of pilots from the outdoor K.O. came byto observe..some flew both indoor and outdoor..a four day model orgy. Outstanding events: The Pearl Harbor Mass Launch had 7 mean looking war machines. One by one Schlesinger Doc,Linstrum, Wells, and Fred Beeson fell to enemy guns. Juergen Kortenbach's P-40 and George Nunez' flew about a minute and a HALF in the finals and Juergen came down last for the victory. In the

1) DEC. ISSUE PLANS ERRATA CORRECTION + NEW DATA !! by VTO



Pistachio Martin MO-1

2) M.17 COLORS BASED ON COLOR FOTOS OF THE ORIGINAL IN DEUTSCHES MUSEUM MUNICH: DEEP "HONEY" AMBER: ENTIRE BODY, WHEELS, FRONT 30% OF WING, FIN, STAB. REST OF SURFACES WHITE BLEACHED LINEN, COWL ALUMINUM, I.D. # BLACK D:779



CORRECTED BODY STINE + WING ROOT T.E.

Messerschmitt M.17

THANKS TO BENNO SABEL + SIEGFRIED GLÖCKNER

Dave Linstrum Special Delta Dart (Jr. FAI Team Fund), George Nunez's special design was 1st, Millard Wells 2nd, Carl Hedley 3rd, and Roger Laudati 4th.

DELTA MEET DEC 30,31,1991 CD: RICH MACENTEE

70 FEET CAT III 1991

FLY DELTA

Peanut Scale:

	Model	Static score	2 best flights			
1.Wayne Trivin	14-Bis	111.0	77.6	79.3	189.4	NEW RECORD ★
2.Juergen Kortenbach,	DH-6	84.0	8 5.0	(Max)	168	
3.George Nunez,	Sop. Tripe	108.0	51.2	54.4	160.8	
4.Doc Martin ,	Waco Floats	103.5	58.5	53.2	159.3	
X. Juergen Kortenbach,	P-40	78.9	Max	Max	157.8	
X.George Nunez,	Hanroit HD1	92.4	48.5	50.0	141.6	
5.Millaer Wells,	P-40	93.0	41	43	135.5	
6.Carl Hedley,	LASA 60	79.2	49.6	45.2	126.6	

Flying Aces Scale:

1.Wayne Trivin,	14-Bis	82	1:12.7 (66.4)	148.4
2.Doc Martin,	Astra Camferer	68	1:19.0 (69.5)	137.5
3.Millard Wells,	Waco E	69	1:06 (63)	132
4.Juergen Kortenbach,	Hell Diver	55	1:30 (75)	130
5.George Nunez,	Devastator	60	41.3	101.3
6.Walt Schlesinger,	Pilatus Por.		26.1	74.1

Pistachio Scale :

			Stat.	Fly		Total
1.Dave Linstrum	Martin MO-1	1		26.5	3	4
2.Doc Martin	Windham	2		35.0	2	4
3.Dave Linstrum	Kalinin K-5	3		42.0	1	4

COCONUT SCALE:

	Stat.	Fly	Total
1.Geo. Nunez Potez 36	1	1:34.5	2
2. D.Linstrum Compte 1		:55.3	4
3.Doc Martin BMW 20b	2	1:31	4

FAC No-Cal Scale: NEW RECORD ★

1.Dick Obarski	Lacey	4:20.6
2.John Voorhees	Farman	3:58.6
3.Doc Martin	Dayton Wright	2:54
4.Joe Nuszer	Lacey	2:46.7
5.Tom McCoy	Lacey	2:40.6

PENNY PLANE:

1.Wayne Trivin	10:44
2.Walt VanGorder	10:01.7
3.Dick Obarski	7:29
4.John Barker	6:00

Unlimited Penny Plane:

1.Walt VanGorder	11:49.7 NEW RECORD ★
2.Joe Nuszer	7:29

EASY B:

1.Walt VanGorder	19:06.7 NEW RECORD ★
2.Dick Obarski	16:05.5
3.John Barker	14:17
4.Ron Ganser	12:30

FROG:

1. Dick Obarski	5:55 NEW RECORD ★
2.Wayne Trivin	4:51

MINI-STICK:

1.Dick Obarski	5:59
2.John Barker	5:37
3.Doc Martin	4:21

BOSTONIAN: NEW RECORD ★

1.Ron Ganser,	Merganser	1.12 3:22	3:48	481.6
2.Wayne Trivin,	No Colors	1.11 3:34	3:35	477.8
3.Dick Obarski,	GEN	1.10 3:12	3:17	427.9
4.Doc Martin,	Dr. Pepper	1:15 1:56	2:16	290.6
5.John Barker,	Scimitar	1.11 2:07	2:11	288.9
6.George Nunez,	Lorax	1.12 1:57	@2:17	284.5
7.Sidney Gilbert ,	7-Up	1.10 2:01	2:02	267.3
8.Carl Hedley,	7-Up	1.10 1:57	1:56	257.7
9..Walt Schlesinger,	Pup	1.10 :26	:22	53.3

DNE Fred Beeson

MANHATTAN CABIN:

1.Walt VanGorder	10:42.3 NEW RECORD ★
2.Ron Ganser	9:00

INTERMEDIATE STICK:

1.Dick Obarski	19:01
2.Ron Ganser	17:32

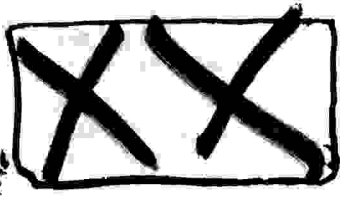
EMBRYO INDURANCE:

1.Wayne Trivin	496
2.Judi Nunez	229
3.Sidney Gilbert	150
4.Walt Schlesinger	110

PEARL HARBOR MASS LAUNCH
1. JUERGEN KORTENBACH
2. GEORGE NUNEZ
3. MILLARD WELLS
4. DAVE LINSTRUM
+ 3 MORE



"OH, NO MR BILL!" "THIS CAN'T BE MY LAST ISSUE!" "YES IT IS, UNLESS YOU GET IN YOUR MIAMA DUES, PLEASE"



CHAPTER #2 - BY TOM ARNOLD - USE OF CARBON FIBER ON FF RUBBER SCALE MODELS.

(3)

CARBON FIBER- The Continuing Saga

By T. Arnold

The more you play with this stuff, the better it becomes! We left off last time talking about a form of CF called a "laminate" and its uses in our low tech airplanes. Since then, I've been introduced to not only more and better forms but also a very accommodating supplier who runs a very prompt mail order service. For a list of their products along with descriptions of them send a SASE to:

Aerospace Composite Products
P.O. Box 16621
Irvine, CA 92714
(714) 250-1107

Going through the product descriptions, the forms of CF we are most interested in are:

Laminate: This is the form described in the last article. The actual carbon fibers are all laid in precise parallel orientation and the whole sheet is bonded to tissue paper by some medium. The stuff is similar to a sheet of thin, stiff, black, typing paper. By nicking the edge, you can peel off long, springy strips down to the width of 1/64 easily. The .007 thickness is the best.

Braided Carbon Cord: Image a long, tiny, tiny, 3 braid pigtail and thats CF cord. The cord is the size, literally, of 1/32 wire. It also is soft and flexible just like hair.

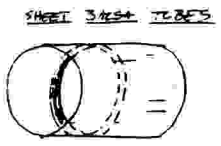
Carbon Fiber Tape: This form is an expanded version of the ribbon, only to keep the 1" width of the hair from tangling up it is lightly mounted on a strip of tissue paper.

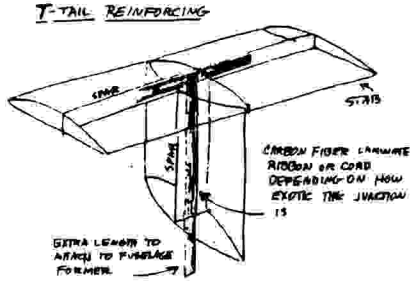
Ribbon: This looks (and feels) exactly like a long, fine lock of my daughter's jet black hair! It is a soft, limp, lock about 1/8" wide that is held together by a "sizing" or something like hairspray that keeps the "hair" together. However, you can spread the fibers apart and split it into narrower "locks" if you wish. In fact, you can tangle the whole thing up just like hair if you really get clumsy fingers. It's also called "tow" in the composite industry.

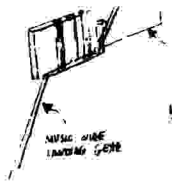
While Aerospace Composites have a good 60+ more products, these are the ones I experimented with. For the purposes of free flight scale, the laminate (.007 thickness) is the most useful as for strength vs. weight just because of the exact linear orientation of the carbon fibers and the varieties of sizes that can be stripped off. Next comes the ribbon as its flexibility and small width can allow you to lay it around corners to strengthen balsa. It can be twisted to form a small cord, wrapped around joints, and run in 3 axis to strengthen joints. Once in place, a soaking with CYA glue gives you "instant metal" almost (without the weight). You'll find that when failure does occur, the balsa will split off a patch of itself that is glued to the CF. In other words, the strength of the balsa itself is the limiting factor which is the way it should be.

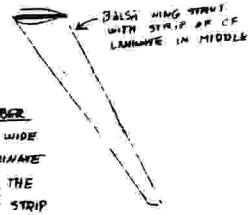
The braided carbon cord also can be used in the same manner without the worry of getting any fibers needlessly tangled and its main advantage is its ease of handling. However, its cost is a lot higher relative to the ribbon. (They've got to pay Tinkerbelle & her friends to braid the stuff at night and Union wages are outta sight).

The carbon fiber tape has the least practicality as far as our small airplanes are concerned mostly because it's just so much. The RC and big plane modelers would find a number of uses though. As a for instance, laying a spanwise strip of the tape, top and bottom of foam wing and bonding it into place is a great and strong instant spar. Doubler reinforcing and such comes to mind too. Essentially, it's like the ribbon only on a grander scale. However, it is also the most for your money but trying to break it down into smaller width is a bear. The ribbon is far superior for handling ease.







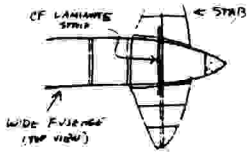


WEIGHT OF CARBON FIBER

A STRIP OF 1/16" WIDE CARBON FIBER LAMINATE (.007 THICK) WEIGHS THE SAME AS A 1/16□ STRIP OF 6.2#/ft³ BALSA !!!

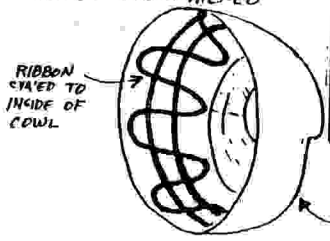
The main thing to remember in any use of CF is that it is strongest in tension and compression directed in a straight line parallel to the fibers. The more you deviate from that ideal situation, the weaker the CF layup becomes. However, even in its most convoluted layups, it's still very strong for our purposes and will do the job.

The second factor to always consider is that the layup must be kept from buckling to have that strength. Your glue bonds have got to be good and the CF needs to be snuggled up tight to the balsa. I lined a bunch of fuselage formers with 1/16" CF strips recently and thanks to my sloppy gluing (I know, I know, but I was in a hurry), they popped out halfway after the stringers had been put on. Jeez, what a zoo it was, too, trying to reattach them!



IN CASE OF A WIDE FUSELAGE AT THE HORIZONTAL STAB THE MAIN STAB REINFORCED WITH A STRIP OF CF LAMINATE CAN BE THE "CARRY THROUGH" MEMBER WITH ALL GLUE ENDING AT THE FUSELAGE SURFACE

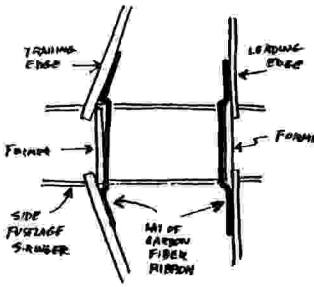
PLASTIC VACU-FORM COWLS CAN BE STRENGTHENED



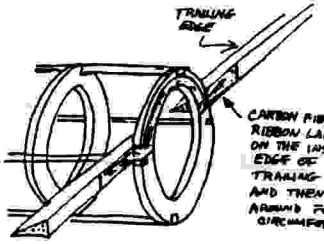
CARBON FIBER: Sheet (.003 to .06), Rod (.07 & .25), 1/2 oz. Mat, Tow, Yarn, Tailboom, Tubes (1 1/4 & 1 1/8 ID). DuPont Stern Yellow Towline (30,50,80 lb.). Electronic DT Timer. Circle Towhook, Towreel. For info send stamped envelope to: Bradley Model Products,1337 Pine Sap Ct., Orlando, Fla., 32825; (407) 277-9132 evenings.

We cry for lightness and strive for low wing loadings so our models will give those soul satisfying slow circles overhead, so why should we be reluctant to use "something" light and strong to achieve that? We cut balsa formers as narrow as we dare, eliminate stringers with a heavy heart, and shave every possible gram we can get away with and yet not want to use a strip of CF that would allow us to cut even more weight? Hobby shopowners must love us the way we paw over their balsa stock pinching, nicking, holding up to the light, weighing and then sniffing that they don't have any decent light stuff. The road we travel for lightness and strength is only exceeded by the indoor crowd. Now, at last, science has sympathized with us and given us something to bring more joy to the flying field . . . and here's the best part: trees have carbon.

NACELLE AND MID WING MOUNTING



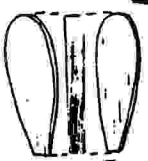
TOP VIEW OF WING-FUSELAGE JUNCTION FOR A MID-WING

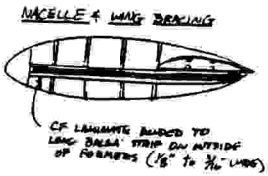


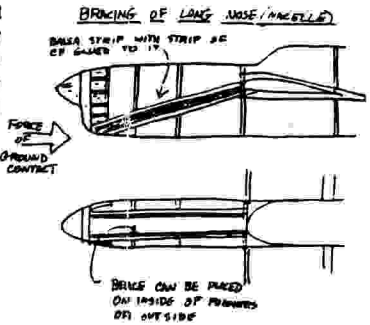
NOTE HOW THE FORMER IS DESIGNED TO BE PLACED AHEAD OF THE TRAILING EDGE. THE CARBON FIBER RIBBON CAN ALSO BE LAID UP ON THE BOTTOM HALF OF THE FORMER. THE SAME PROCEDURE CAN BE DONE FOR THE LEADING EDGE. (SEE TOP VIEW SKETCH)

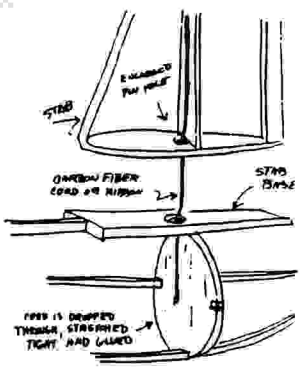
To Subscribe to SCALE STAFFEL NEWSLETTER- SEND $15 TO: BOB WRIGHT, 6823 BELLE GLADE AVE. SAN DIEGO CA 92119

The illustrations are mainly concerned with uses of the ribbon and I will say that they all have not been tried (but will be) so take them as suggestions for right now. A little philosophy might be in order here. I realize that there is a strong tree lobby in free flight scale ("if it don't come from wood, it ain't no good"), but wait! Hear me out. First off, we are trying to replicate a lot of times in wood what was originally built in metal. Metal is a lot stronger than wood and designers really had a field day when they were finally freed from trying to haul a lumberyard through the air. Planes got stronger, faster, wing loadings dropped (yes, they did - until engines got more power), and designers could follow the laws of aerodynamics instead of fighting them. Junctions of nacelles and wings got impossibly skinny, flying surfaces became thinner, noses got longer, landing gear moved to the wings, for just a few examples. That's tough enough to replicate in wood & tissue but now put a flailing snake called a rubber motor right through the middle of the fuselage or nacelle. What little strength you had just disappeared. Ever build an F4F wildcat? Wasn't it great to pick it up after it did a cartwheel and feel that wobbly wing? It probably didn't even hit too hard or maybe it did. Whatever, it's always a thrill to stand in the hot sun with sweat drippings off your nose trying to glue a mass of shattered formers and stringers via long distance through the nose opening.



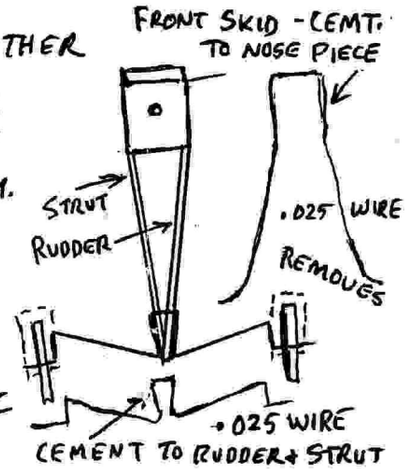






20/20 CAN BE EITHER AN INDOOR OR OUTDOOR MODEL. MIAMA RULES LIMIT INDOOR TO 10 gm. OUTDOOR SHOULD BE TWICE THIS. FLY RIGHT/RIGHT. INDOOR PROP - LIGHT SHEET OR FOAM; OUTDOORS - PLASTIC

(5)



SWAP LIST

The following kits and plans - all new and unused - are available for swapping for kits and/or plans of scale balsa and tissue built up jets suitable to conversion to small jet power, especially modern jet fighters. All prices are at or below list.

RUBBER POWERED PLANS:

FAIRCHILD AU-23 TURBO-PORTER by AA Lidberg, 40" span $5.00
FOCKE WULF TA 152H-1 FAC or AMA FLYING SCALE by AA Lidberg, 40" $5.00
KYUSHU J7W1 SHINDEN CANARD PUSHER SCALE by Dave Diels, 18¼" $5.00
REPUBLIC F-84G THUNDERJET WHIP-POWERED by Joe Wagner $3.00
FIGHTER NO. F5B SCALE by Paul Guillow 16" $3.00
PROFILE MBB HFB 320 HANSA NOCAL by AA Lidberg 16" $1.00
1933 PROFILE KEITH-RIDER R2 "BUMBLEBEE" NOCAL by AA Lidberg $1.00
1941 "SUPER STUFF" by OTTO CURTH CHICAGO AERONUTS 33" $4.00
1937 OPEN CLASS WORLD RECORD OUTDOOR "D" DUPLEX by C Lanzo 42" $5.00
THE NEW GOLLYWOCK CLASS "C" STICK MODEL by Simmers 31 3/4" $4.00

FUN MODELS by David Aronstein: RUBBER POWERED PLANS

Bi-ROG Quick to build boxkite-style biplane 13" $1.00
Baby R.O.W. 'tricycle-gear' float layout 13" $1.00
Embryo Update Embry Endurance class model. 15½" $2.00
Moynet Jupiter push-pull commuterliner 16" $1.00
Goldwing - canard ultralight, 2½ minute flights $1.00
Miles M-35 Libellula - British experimental canard 14 3/4" $1.00

(10)

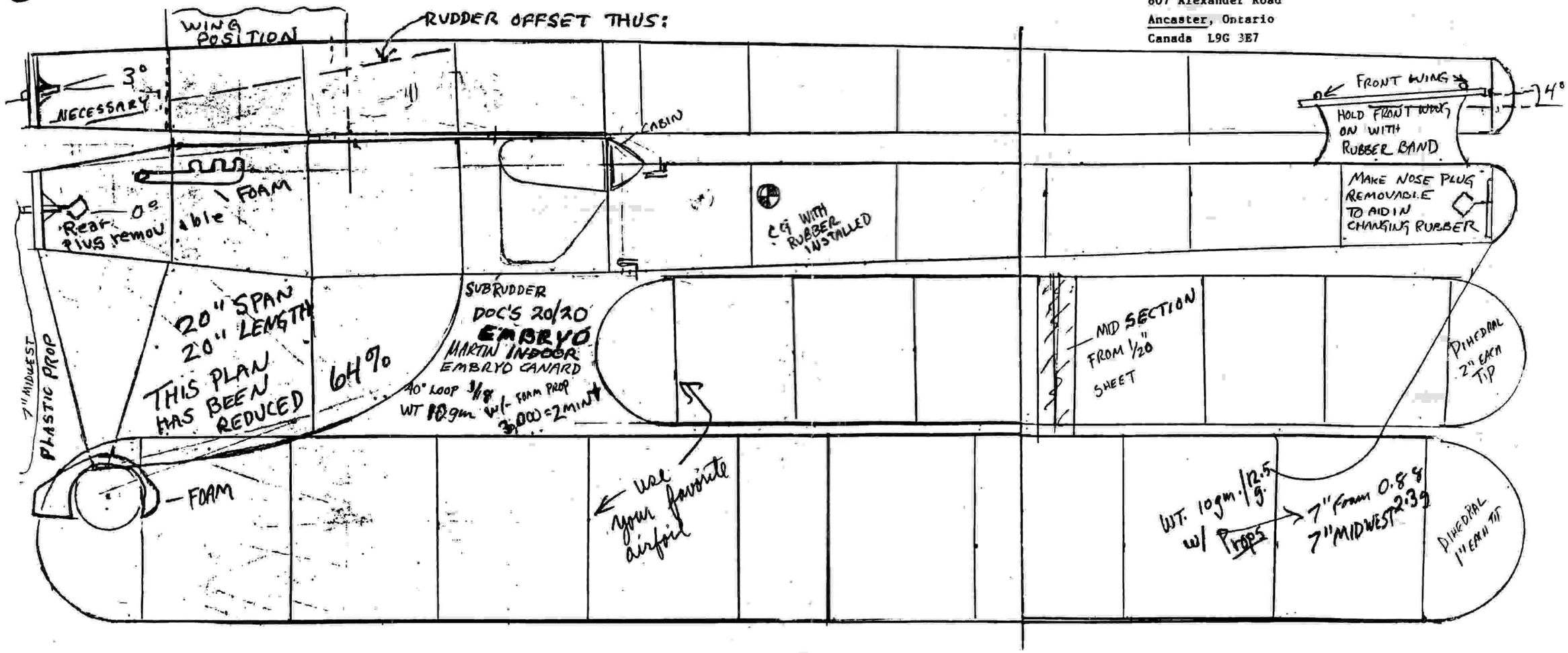
RUBBER POWERED KITS:

HEINKEL HE100D by Don Srull kitted by Flyline Models 23" $16.00
BOSTONIAN "PUP" by Bob Peck 16" $9.00

WANTED KITS:

Today's Hobbies F-18 HORNET, F-16 FALCON.

Bill Littlewood
807 Alexander Road
Ancaster, Ontario
Canada L9G 3E7



BEARDMORE INFLEXIBLE FROM SKYWAYS ISSUE #13

COLOR AND MARKING:

TRY SOMETHING DIFFERENT A 20" SPAN TRI-MOTOR PEANUT... FLYS GREAT.

BY DOC MARTIN

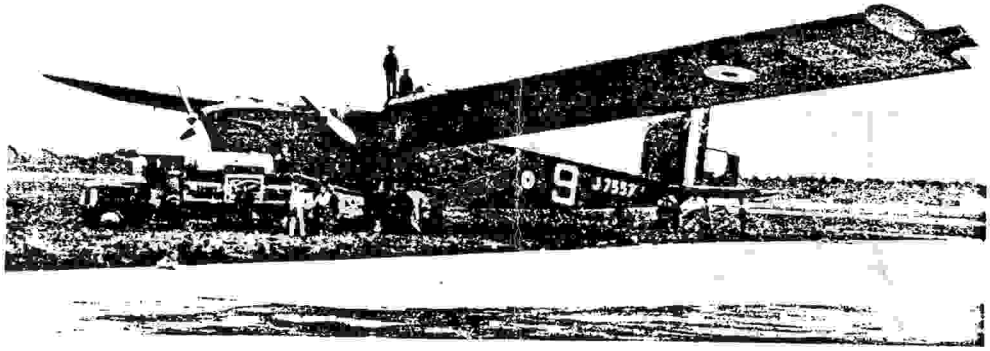
(6)

With the aircraft having such a giant structure, there was doubt as to whether the runway was of sufficient length, and extentions were made to the aerodrome side of "B" Flight road at Martlesham with consideration also being given to wind direction. However, conditions were perfect for the Inflexible's first flight on March 5, 1928 with Sqdn. Ldr. Jack Noakes at the controls and carrying one passenger, a representative from Beardmore's. Interested spectators included several of the manufacturers who supplied equipment and most of the station's RAF personnel, and they all witnessed an extremely stable flight, even at the Inflexible's top speed of only 100 mph.

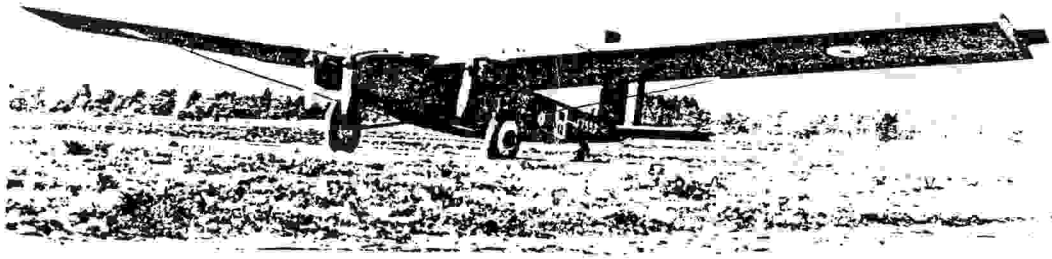
During its life at Martlesham, which was its only base, the Inflexible was flown to the ninth RAF Display at Hendon where it was allocated aircraft number 9. It created a great deal of interest with an overall khaki finish with standard RAF roundels and rudder stripes, the serial number J7557 in large figures on the fuselage side, and people came from all over the display to autograph the huge airframe.

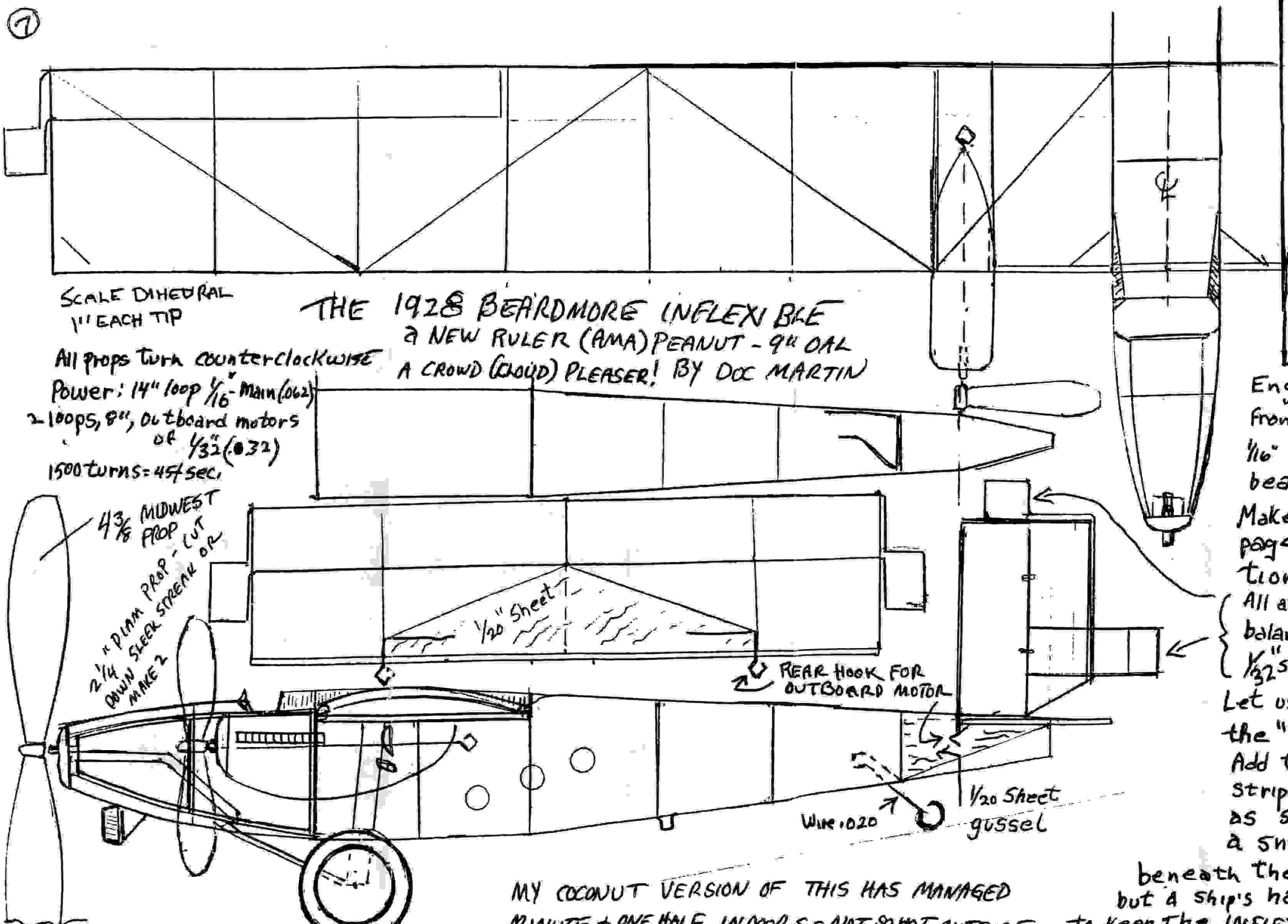
In its limited life, the Inflexible managed to attend the Norfolk and Norwich Aero Club display at Mousehold, May 18 to 20, 1929, and the Cambridge Aero Club display at Conington on June 10-11. Finally, it flew past at the opening of the Kensington-Upon-Hull municipal airport on October 29th. That was its last public appearance. In January of the following year, the Rolls Royce Condor engines were removed for storage and the airframe used as a test bed to ascertain the ultimate strength of the metal structure, especially the Dural covering. By 1931, with the airframe being of no further use, the wire hauser was removed and corrosion testing carried out by applying various anti-corrosion paints to the framework.

With such a sad end to all the hard work he had put in, W.S. Shackleton, still recovering from illness, saw no prospects of any further orders for all metal airplanes and Beardmore's again closed down their aircraft department. Eventually, Shackleton decided to emigrate to Australia where he became the chief designer of Larkin Aircraft.

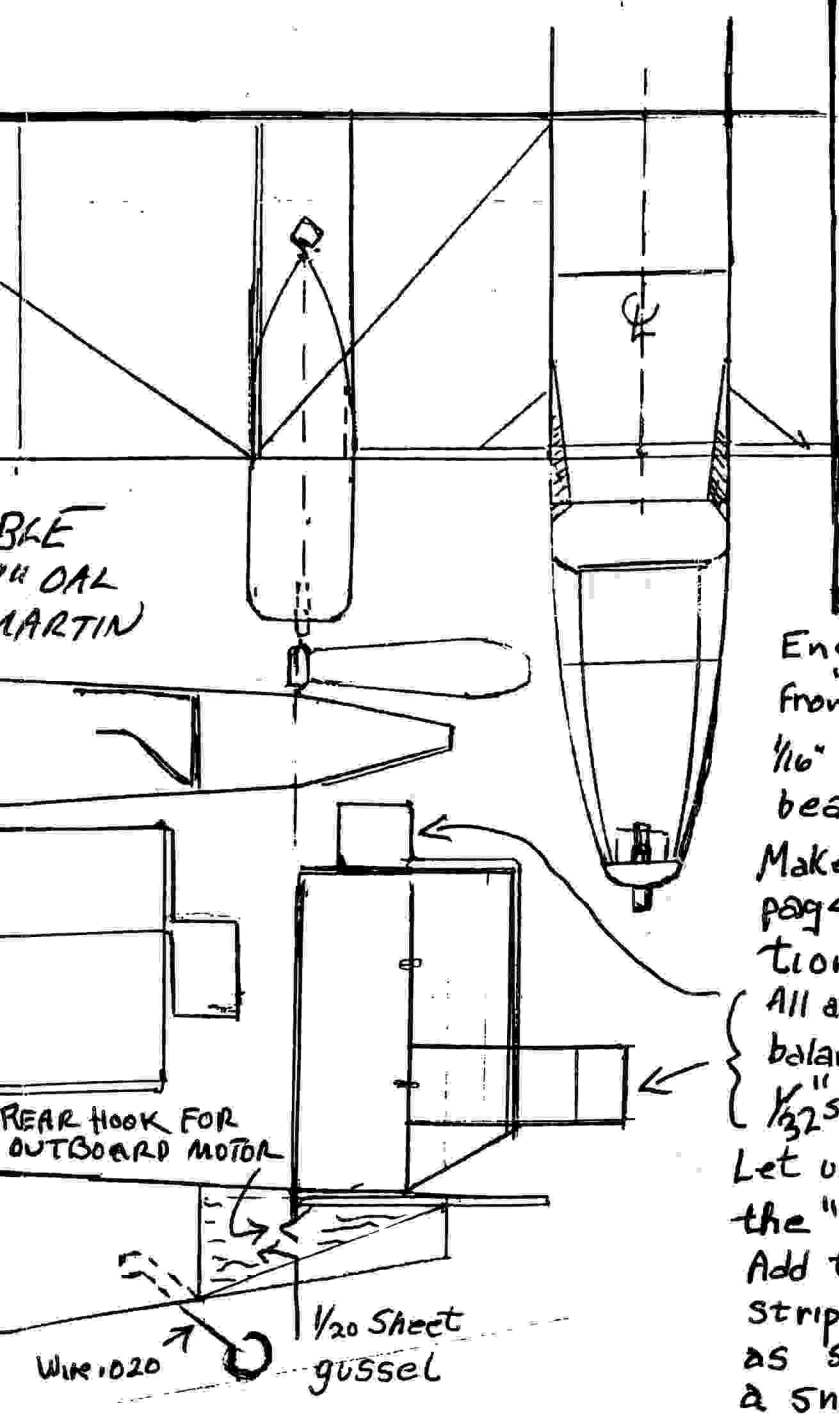


The enormous Beardmore Inflexible at the time it was flown to the 1928 Hendon Air Display. (RAF Museum P11933 & Author)




SCALE DIHEDRAL
1" EACH TIP
THE 1928 BEARDMORE INFLEXIBLE
a NEW RULER (AMA) PEANUT - 9" OAL
A CROWD (CLOUD) PLEASER! BY DOC MARTIN
All props turn counterclockwise
Power: 14" loop 1/16" - Main (.062)
2 loops, 8", Outboard motors
or 1/32" (.032)
1500 turns = 45 sec.
4 3/8 MIDWEST PROP
2 1/4" PLAM PROP - CUT DOWN SLEEK STREAK OR MAKE 2
1/20" Sheet
REAR HOOK FOR OUTBOARD MOTOR
Wire .020
1/20 Sheet gussel
MY COCONUT VERSION OF THIS HAS MANAGED
MINUTE + ONE HALF INDOORS - NOT SO HOT OUTSIDE
beneath the
but a ship's ha
to keep the INFLE

EDITORIAL FROM STAN FINK: The AMA dealt Indoor flyers a nasty blow by withdrawing support from the USIC and attempting to revive the defunct "unified Nats" at Chicopee, Mass. for 1992. Since the two events (USIC and AMA Indoor Nats) are 3 weeks apart, most will have to choose one or the other, making somebody a loser, most likely the USIC which might lose East Coast contestants to the AMA Nats. While I wouldn't go as far as urging a boycott of the AMA Nats, I just want people to be aware that a significant loss of attendance at the USIC could put the NFFS in the red and jeopardize the future of the USIC. (NFFS)

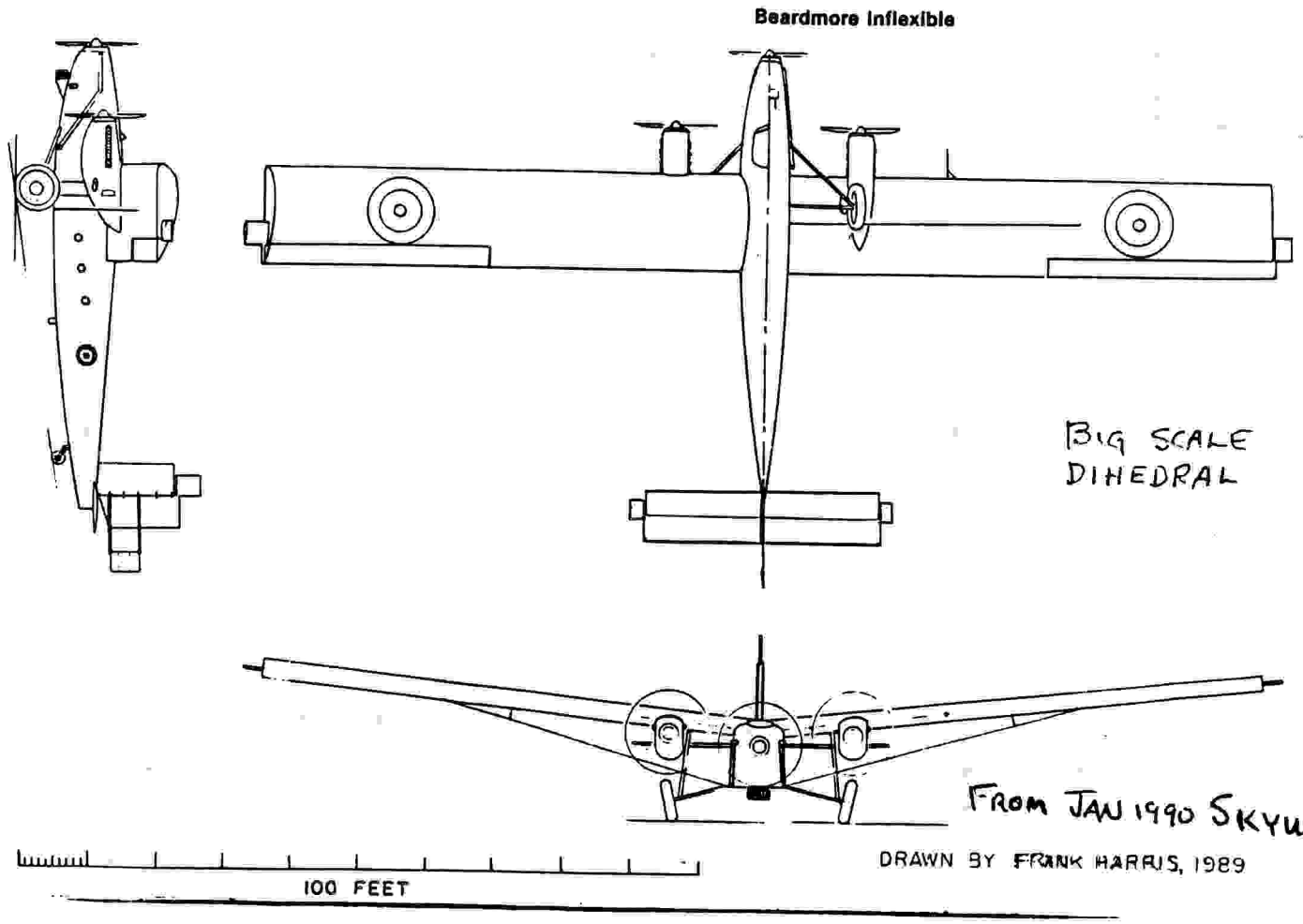


Engine nacelles carved from foam, as are wheels. 1/16" Alum. tube thrust bearings. Use white glue. Make use of 3-view on next page for much of construction + details.

All aileron, rudder, + elevator balance sections cut from 1/32" sheet or thin foam.

Let us know how YOU achieved the "KHAKI FINISH" (Please!) Add the roundels, rudder stripes + the "g J7557" as seen on the photo for a snappy finish. The brace beneath the wing is NOT a strut but a ship's hawser found necessary to keep the INFLEXIBLE from being TOO FLEXIBLE!

F THIS HAS MANAGED
RS - NOT SO HOT OUTSIDE


Beardmore Inflexible
BIG SCALE
DIHEDRAL
FROM JAN 1990 SKYWAYS
DRAWN BY FRANK HARRIS, 1989
100 FEET

(11) BEHIND THE SCENES

Nats Planning for '92 AMA

by Jean Pallet, the Skyscrapers

There I was, spending a quiet evening at home in mid-September, when out of the blue (actually out of Wisconsin) comes a phone call from NFFS President Tony Italiano. Did I know that the AMA was planning an old-fashioned all-categories (RC, CL, and Indoor and Outdoor FF) Nats for 1992? No, I didn't! And guess where. Okay, I give up. Where? Why right in your own backyard, at Westover AFB, Chicopee, Mass! Dates are June 20–28, 1992. And could I go up there on Sept. 21 to represent NFFS at the Nats Planning Meeting? Why, sure, I'd be glad to.

Now you know the background for what follows: How the event scheduling and field layout for the '92 Nats came to be—and who to throw rocks at if your favorite event(s) aren't on the days you'd prefer.

Having been thus anointed to carry the ball for the entire Free-Flight community, the first thing I did was to get somebody to join me (to share the blame). That somebody was George Armstead of Glastonbury, Conn. In addition to being a calm and reasonable person, George offered several unique qualifications: He CDed the last SAM Champs at Westover, is intimately familiar with the field and knows the Base Manager quite well, and he has a more current knowledge of Indoor FF and the proposed site (the Base Hangar) than I do. Thus reinforced with an able partner, I attended the meeting on Saturday morning Sept. 21, 1991.

In addition to our two-man FF contingent, attendees included various facets of Radio Control and Control-Line, various members of the Nats Management Committee (including Sandy Frank for FF), the Westover Chief of Airfield Management, AMA's Nats General Manager (Chip Smith), and AMA Executive Director Vince Mankowski.

Our first activity was a detailed tour of the base with many stops and enroute discussions of what events would best fit where. George's knowledge of Westover's layout and terrain was invaluable in our efforts to accommodate the sometimes conflicting needs of the various modeling categories. Due to the somewhat cramped space available, there inevitably will be some problems during the contest, but all present worked conscientiously and cooperatively to make the best of a less-than-ideal site. For instance, the new light fixtures at the Indoor site have a rigid support, as opposed to the earlier chain-hung fixtures. Getting them out of the way will be a problem—and may be impossible—but base personnel assured us that they would try.

After the tour, the group met to work out the scheduling of events—day-by-day and category-by-category. In order to keep the first Saturday (6/20) and the last Sunday (6/28) open as "travel days," I worked towards keeping all of the Free-Flight events (both Indoor and Outdoor) within a Sunday to Saturday framework. Another self-imposed restriction was to schedule "similar" events on different days. For instance: Outdoor rubber events are on separate and consecutive days; the mini-FAI events (A-1, Coupe, and F1J) are on separate and consecutive days; F1J and 1/2A and A-gas are all on separate days; A and B electric are on separate and consecutive days; Payload and Cargo are on separate and consecutive days. Now, obviously there will always be some flyers who'd prefer to have more of "their" events grouped on a single day for whatever personal reasons they may have. Also obviously, there is no "right" or "wrong"; it is simply a judgment call—and we used our best judgment. All I'm trying to impress upon you is the amount and type of thinking, concern, and consideration that went into the final schedule.

Another serious concern was the flying of RC Helicopter on Tuesday (first day of Outdoor FF) in an area fairly close to and probably downwind from the likely FF launch site. That's the reason for scheduling only three relatively "tame" Outdoor FF events on Tuesday (6/23), the first day of Outdoor FF activity. Also considered and accommodated was scheduling two of the highest-entry outdoor events (Coupe and 1/2A gas) on Saturday—hopefully to accommodate the largest possible number of Free-Flighters.

Another parameter considered was the Scale Judging requirements for ALL categories (including RC), which somewhat dictated the schedule for Indoor and Outdoor FF Scale flying dates. However, note that the Outdoor Scale contestants have a choice of flying on Monday afternoon (6/22) and/or on Tuesday morning (6/23).

So there you have it. That's how the 1992 site layout and event schedule were determined. They are the result of a lot of forethought (discussions were held with a number of free-flighters before the meeting), much time and effort, and serious discussion, consideration, and compromise by a group of dedicated individuals. I hope you'll be reasonably satisfied. If not, YOU can try to do it better next time!

1992 Nats Schedule for Indoor Free-Flight

Sunday 6/21	Monday 6/22	Tuesday 6/28
8am—2pm	8a.m—Noon	8am—Noon
Indr. Stick	Peanut scale	Lite PennyPlane (J)
Manhattan	Rubber scale	Noon—5pm
2pm—8pm	Bostonian-14g (J)	PennyPlane
HLG (J)	Noon—8pm	EZB
	F1D	5pm—9pm
		F1D

1992 Nats Schedule for Outdoor Free-Flight Events

Tuesday 6/23	Wednesday 6/24	Thursday 6/25	Friday 6/26	Saturday 6/27
CO_2	A-gas	B-gas	C-gas	D-gas
Payload	HLG (J)	F1J (J)	F1H (Nordic A1)(J)	1/2A-gas (J)
Catapult glider (J)	F1B (Wakefield)	F1A (Nordic A2)	F1C (FAI Power)	F1G (Cd'H)
	Cargo	Mulvihill	P-30 (J)	
	A Electric	B Electric		

Note: FF Scale events (Peanut (J), Rubber Scale, Gas Scale) are to be flown Noon to 4pm Monday 6/22 and 8am to noon Tuesday 6/23

(J): Events to be flown in two age groups: Jr only and Sr–Open combined

GAUNTLET HURLED IN MIAMA'S FACE BY UPSTART CLUBS - A CHALLENGE FROM SCALE STAFFEL + ST. JOHN'S:



ANDREASON BA4-B
Wing span 12"
Kit PP-6—$7.95

St. John's Sewing Circle offers Self Sacrifice

— a staff report FROM Scale Staffel Newsletter

The infamous Tommy Wilson of New Brunswick, Canada, sent the Scale Staffel a letter in which another challenge was thrown down in the arena of rubber powered stick & tissue airplanes. The brutal licking they took last time (admittedly at the hands of MIAMA) did not teach them their place. They wish to have it done again, this time we know it will be at torque of our winders. The MIAMA Club was also an object of their delusions of grandeur and we pass on this challenge to them too. The MIAMA Club (Miami Indoor Aircraft Model Association) of Florida, known colloquelly around the country as the MIAMA Macrame and Bead Club, occasionally fly Sleek Streaks. The Scale Staffel feels no serious threat would come from that quarter but still are delighted to offer their adult handicraft club an opportunity to learn to fly indoor scale.

The St. John's Sewing Circle, however, are indeed, an ominous threat. If you remember, with our Reverse Standings from the last conflict they were admittedly closer behind us than we felt comfortable with. The fact the St. Johnnies are all part time RC'ers makes this positioning to a True & Pure Free Flight Scale Club somewhat embarrassing. So, we accept. St. John's has chosen as their sword to fall on the **Peck Polymers Andreason BA-4** in March 1992. They chose this as it was designed by Walt Mooney and kitted by Bob Peck, which makes it pretty appropriate. The models are to be built from the kit or from old Peck plans using the same size wood and exact hardware (prop, wire). It was debated that, due to our latitude here in San Diego and the adverse force of the westerly Coriolis effect combining with the documented shortage of lift in our gym, that a fair and just compensating factor be applied to our two competitors to "level the playing field" so to speak. Here they are:

Canada: Outdoors in March with mittens.

Florida Compensator: A 50¢ piece glued to the underside of the right horizontal stabilizer.

While the rules committee was accused of being a bit generous, we feel that a little help to beginners and middle aged men is okay.

THE MODEL: OK, PILOTS, BUILD THIS GREAT FLYING BIPLANE AND SEND YOUR TIMES TO MIAMA BY MAR. THEY WILL APPEAR IN APRIL ISSUE OF H.P.

LET'S SHOW THESE UPSTARTS!

BRING A BA4-B TO NEXT MEET OR FEB MEET

PLANES WORTH MODELING

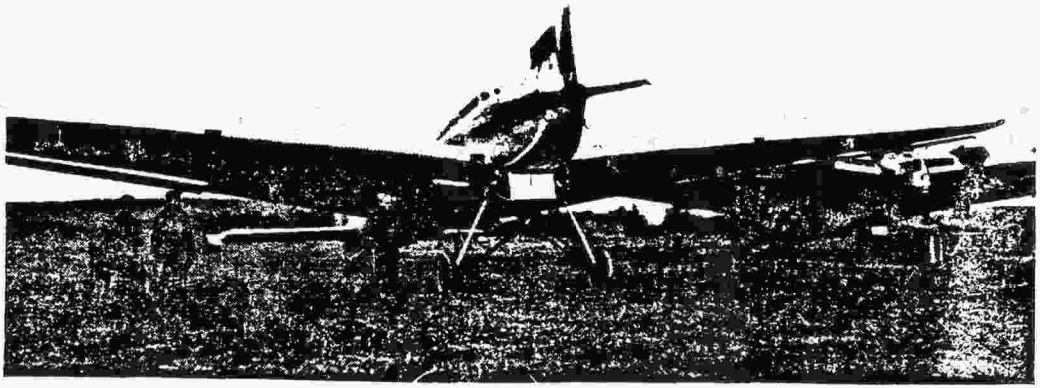
High-flying Junkers

I shall be glad if you will include in 'Plane Facts' a general arrangement drawing and some details of the Junkers Ju 49 research plane of the early 'thirties.

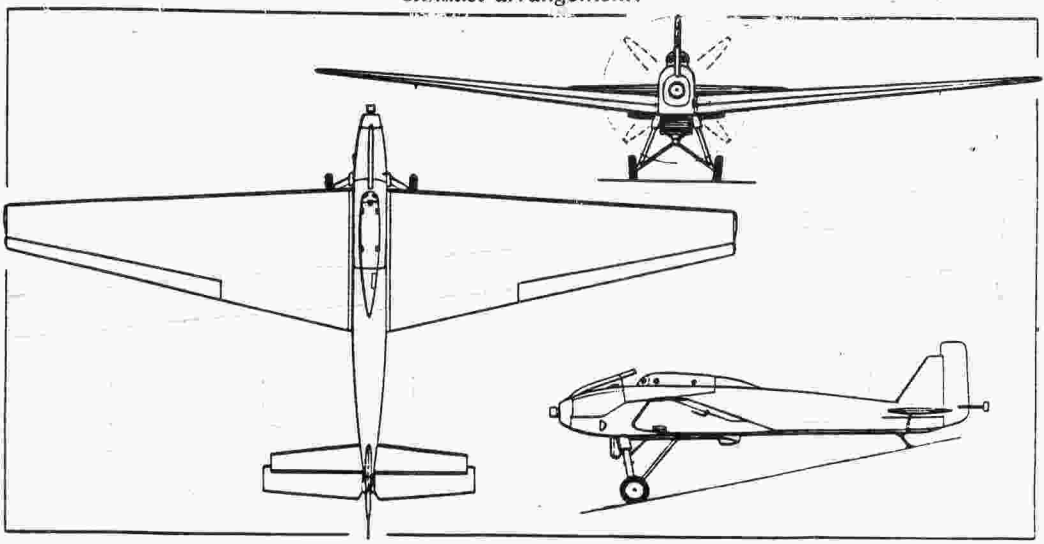
Christian Emrich, 8051 Neufahrn, Germany

The Junkers Ju 49ba was a specialised high-altitude research aircraft, development of which was initiated in 1928 in collaboration with Dr-Ing Asmus Hansen of the *Deutsche Versuchsanstalt für Luftfahrt* (German Aviation Experimental Establishment). Initially registered D-2688 and later D-UBAZ, the Ju 49ba embodied a noteworthy innovation by comparison with previous high-altitude aircraft, a pressure cabin accommodating two crew members. The pressure cabin, constructed of *Elektron* alloy, was inserted in the airframe as a capsule, small portholes providing forward and side vision for the pilot and observer. Power was provided by a Junkers L 88a 12-cylinder liquid-cooled engine rated at 800 hp for take-off and driving a large-diameter four-bladed airscrew, but various problems delayed the commencement of flight testing until 2 October 1931. The L 88a engine proved extremely troublesome, necessitating the abrupt termination of most test flights, but in September 1933 an altitude in excess of 29,530 ft (9 000 m) was attained. Two years later, in 1935, the Ju 49ba reached 42,650 ft (13 000 m).

The Ju 49ba had empty and loaded weights of 7,937 lb (3 600 kg) and 9,370 lb (4 250 kg) respectively, and overall dimensions included a span of 92 ft 8½ in (28,26 m), a length of 56 ft 5⅛ in (17,20 m), and a height (tail down) of 15 ft 7 in (4,75 m).

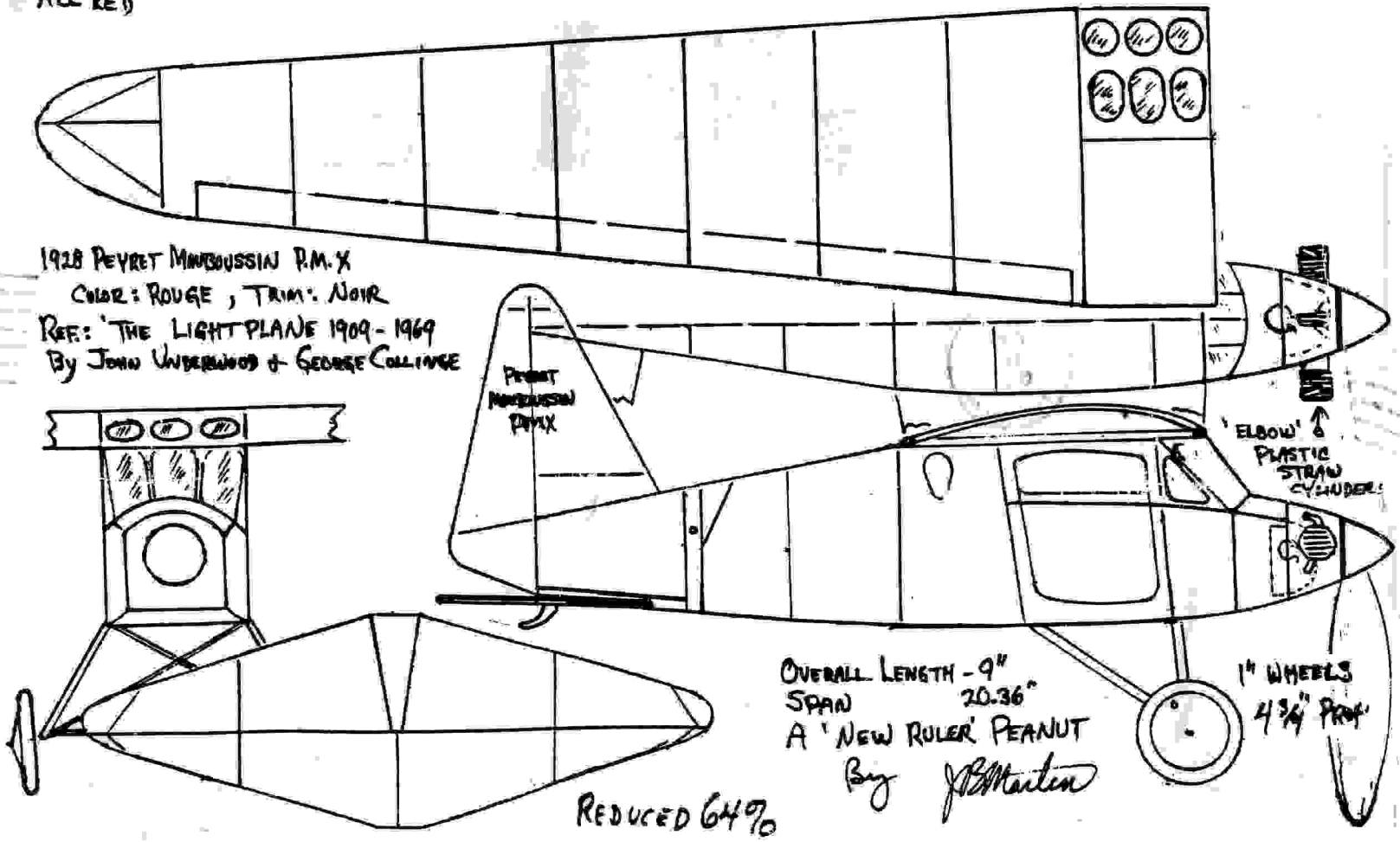


The Junkers Ju 49ba high-altitude research aircraft is seen above in its original form with vertical exhaust stack. The general arrangement drawing below illustrates the definitive exhaust arrangement.



FROM AIR ENTHUSIAST SEPT. '71

ALL RED



1928 PEYRET MINDOUSSIN P.M.X
COLOR: ROUGE, TRIM: NOIR
REF: 'THE LIGHTPLANE 1909-1969
By JOHN UNDERWOOD & GEORGE COLLINGE



JAN 25,26 US COAST GUARD HANGAR..ST. PETE/CLEARWATER AIRPORT (CAT II) 9 To 5.
MIAMA INDOOR MEET $4 CD Dick Obarski 813-634-8683
FAC MASS LAUNCH Golden Age SUNDAY...NOON
FEB.22.23 MACDILL AFB, Tampa MIAMA INDOOR MEET #5 FAC Mass Launch MODERN
MARCH 7,8 Palm Bay Spring Opener...FAC events
MARCH 8 DADE COUNTY: Local Fly in at Miami Dade South College 9 to ?
MARCH 21,22 MACDILL AFB, Tampa..MIAMA indoor meet #6 FAC Mass Launch WW-I
APRIL 11,12: DADE COUNTY..PISTACHIO PROXY INTER-GNATS and Fun Fly M/D South.
APRIL 25.26 PALM BAY..Spring Old Timers meet FAC Events SAM 46
MAY 9.10: MACDILL AFB Last MIAMA indoor meet of 1991,1992 season
FAC MASS LAUNCH RACEPLANES
MAY 30,31 Rebel Rally
JUNE 20--23: WESTOVER AFB,Mass. AMA COMBINED NATS (Schedule Inside)
JUNE 20,21: PALM BAY...One designer meet
JUNE 4 to 7 JOHNSON CITY,TN The indoor Biggie NFFS National Indoor Champs
JULY 11,12:PALM BAY..Florida State FF Champs (FAC) And MIAMA GRAND PRIX
JULY 10,11,12: GENESEO,NY...The FAC biggie...The FAC NATS
AUG 1: ISLAMORADA,FL..Annual Millard Wells GREAT FL KEYES ROW MEET.

THE HANGAR PILOT

EDITOR: DR JOHN MARTIN, JR
2180 TIGERTAIL AVE MIAMI FLA.
33133

