Best of THE HANGAR PILOT

COMPILED BY DAVE LINSTRUM 1995

WILL DO A FINAL VOL. 7 IF THERE IS DEMAND...

AND A FEW EARLIER ISSUES...

VOL 6: 1993-94

A 1993 READER SURVEY BY EDITOR DOC MARTIN SHOWS PREFERENCE FOR PLANS, SCALE DOCS, HOW-TO AND FUNKY FORMAT: DOC'S LOTECH DESKTOP PUBLISHING METHODS IN USE SINCE 1971! AND IT'S STILL SLOPPY LOOKING!

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ISSUE #	ITEM	AUTHOR/CREDIT
OLDIES BUT GOODIES- EARLY ISSUES	KALININ K-4 PNUT	DOC MARTIN
	PACIFIC ACE PISTACHIO	DAVE LINSTRUM
	PISTACHIO RULES	MIAMA / DOC
	CHESTER GOON PISTACHIO	DAVE ARONSTEIN
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VOLUME UNBOUND TO EASE COPYING!

COVER ART DID NOT MAKE CUT FOR VOL.5 SO IS USED HERE!

Vol 6: 1993-94 AND EARLIER

COVER 95% TRUE SIZE.

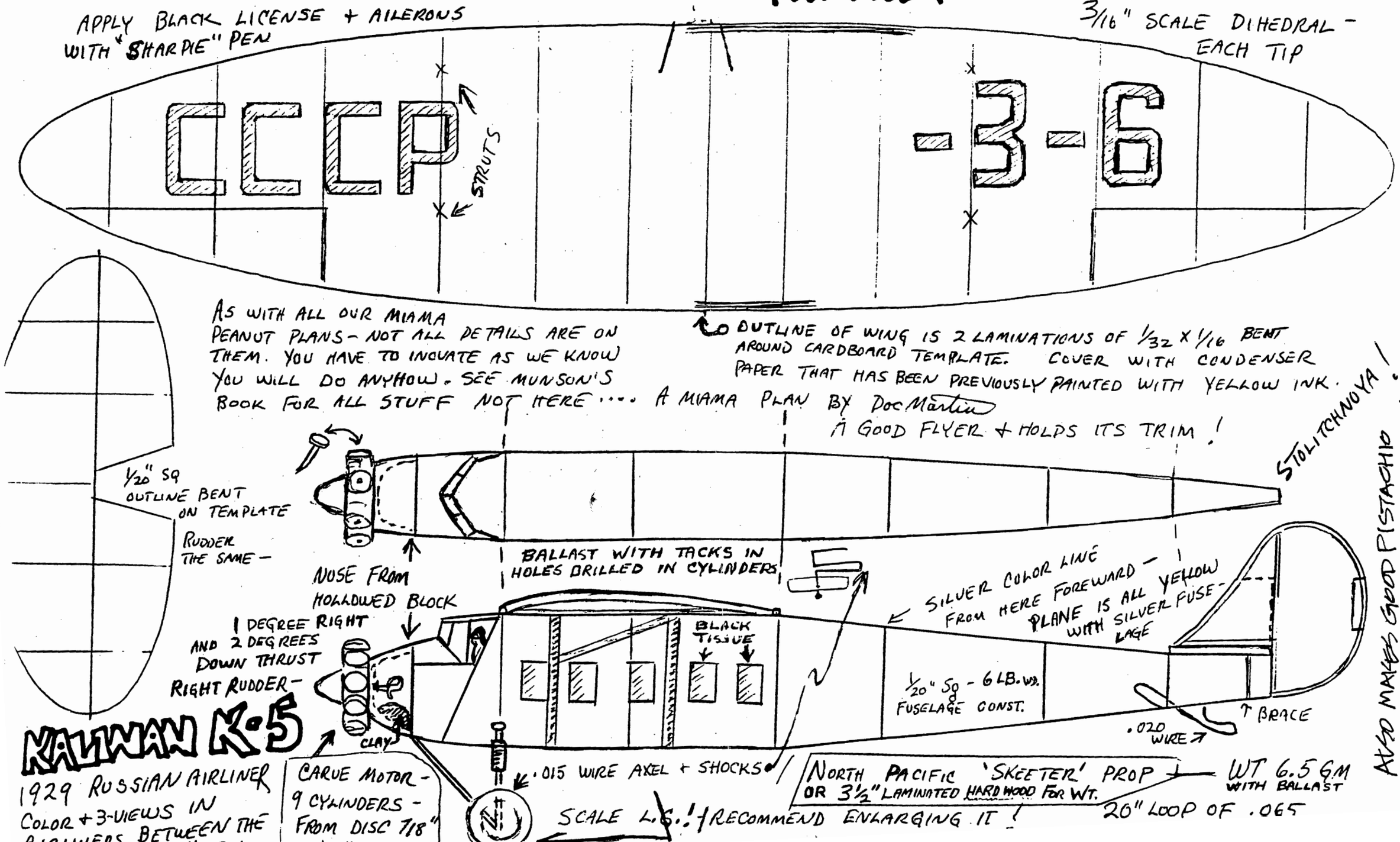
1936 ARTIST UNKNOWN A REAL ANTIQUE! NOSTALGIA!



LOOK FOR VOL 7 SOMEDAY...

Best of the HANGAR PILOT

FULL SIZE PLAN DOC'S RUSSIAN PEANUT



KALIWAN K-5

1929 RUSSIAN AIRLINER

COLOR + 3-VIEWS IN

BUILDING TINY PISTACHIO BUILDS CHARACTER!

PISTACHIO NOTES - OFFICIAL MIAMA RULES

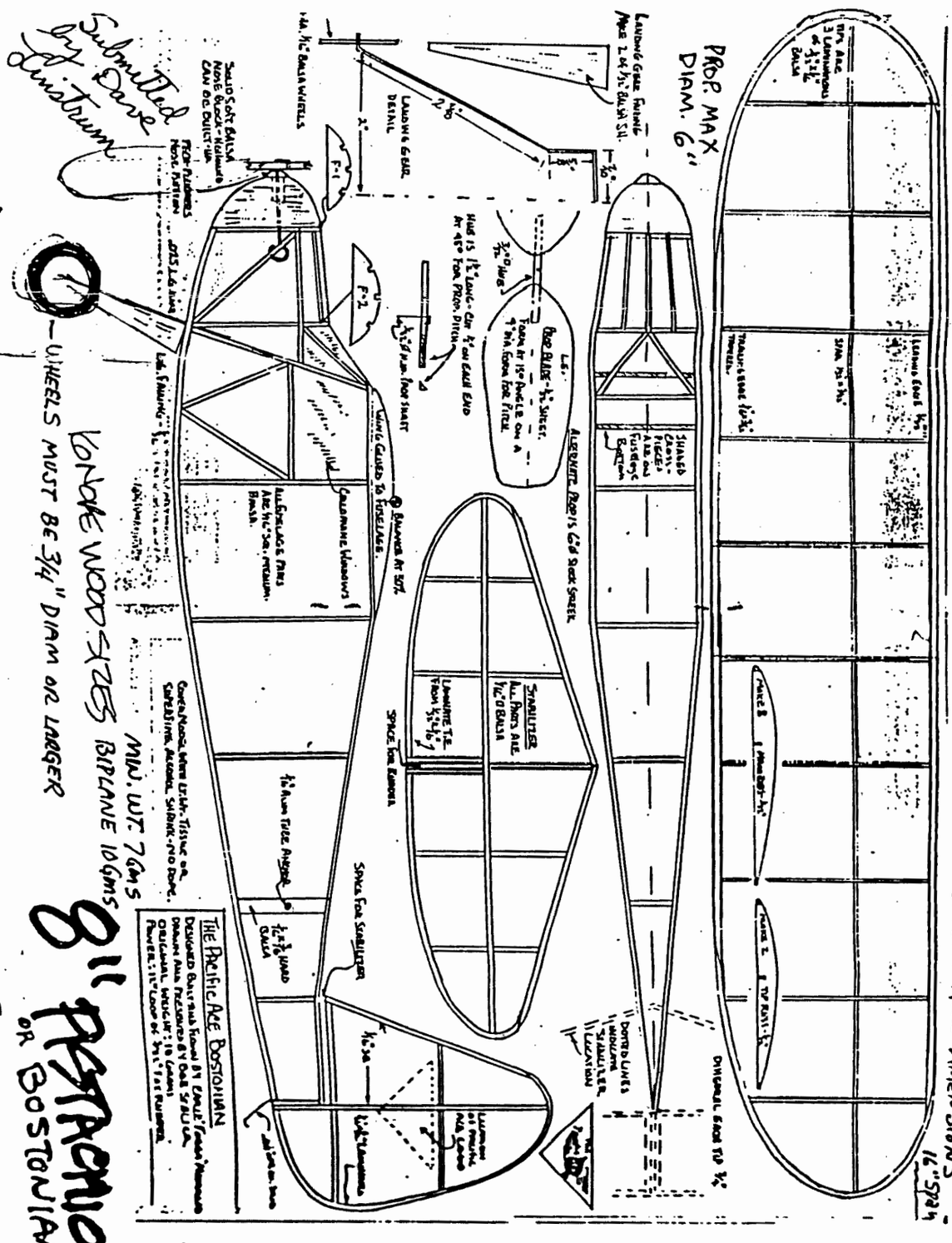
MIAMA PISTACHIO RULES: SAME AS AMA PEANUT RULES WITH THESE EXCEPTIONS:
1.Model may be built to either 8 inch span or 6" overall length.(Not including prop.)
2.Single surface covering permitted without penalty.
3. No bonus points for ROG (H.L. flying)
4.No limit on flight time. AMA rules specify average of two best flight times of 9 and documentation of a 3-view, photo and color reference. Multiple entries and re entry permitted.

For a large field of entries we have five classes:
Class I- up to 2 grams. Class II-2 to 3 grams Class III- over 3 grams
Ridotto class- Smallest span model to fly 30 seconds.
Model of a model class- Fuselage model of any type outdoor free flight model.

FUTURE PISTACHIO EVENTS -

MAY 21,22 WORLD INTER GNATS.....Proxy international meet All classes.
JUNE 2- JOHNSON CITY.....MIAMA PISTACHIO GRAND PRIX. All classes and mass launch events
AUG 19,20 FLEMALLE BELGIUM- Proxy international meet. Not MIAMA rules.
ALL MIAMA INDOOR MEETS HAVE A PISTACHIO CLASS EVENT.

We recommend Walt Mooney's Bag #6 of 36 pistachio plans. Send $5.00 to Walt at P.O. box 231192 San Diego,Calif. 92123



HOW TO PREPARE FOR MIAMA CONTESTS? Penny Plane and Glider and Easy B are available in kits from Micro-X (Jerry Skrjanc)or Indoor Model Supplies (Lew Gitlow) Their Ads are in most model publications...especially FLYING MODELS. Get their catalogs! A Bostonian is presented above and in back issues of HANGAR PILOT. No kits as yet. Peanut is everywhere. Most Pistachio information appears here. FLYING ACES SCALE is any scale model larger than peanut with a 3-view and a photo. ROG Stick is a bit obscure,Manhattan from Ron Williams book. Ask other MIAMA members for their plans and help. Dig up back issues. Have Fun.

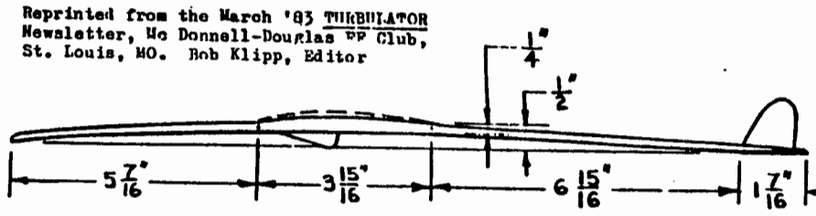
SAVE YOUR ARM - FLY INDOOR CATAPULT GLIDER !!

PILOTS, TRY THIS CATAPULT GLIDER

ORIGINAL SPAN: 18" REDUCED TO 12".

Here is the famous Stoy Coot reduced to catapult glider dimensions. We haven't tried it as yet but it looks full of potential. You will have to add a tab at the tail to hold it, and a launching hook on the nose. Perhaps the fuselage may need beefing up to withstand launch stress

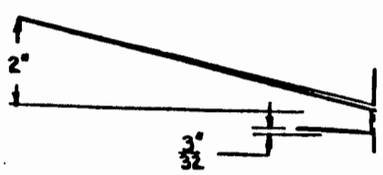
Reprinted from the March '83 THERMALATOR Newsletter, Mc Donnell-Douglas RP Club, St. Louis, MO. Bob Klipp, Editor



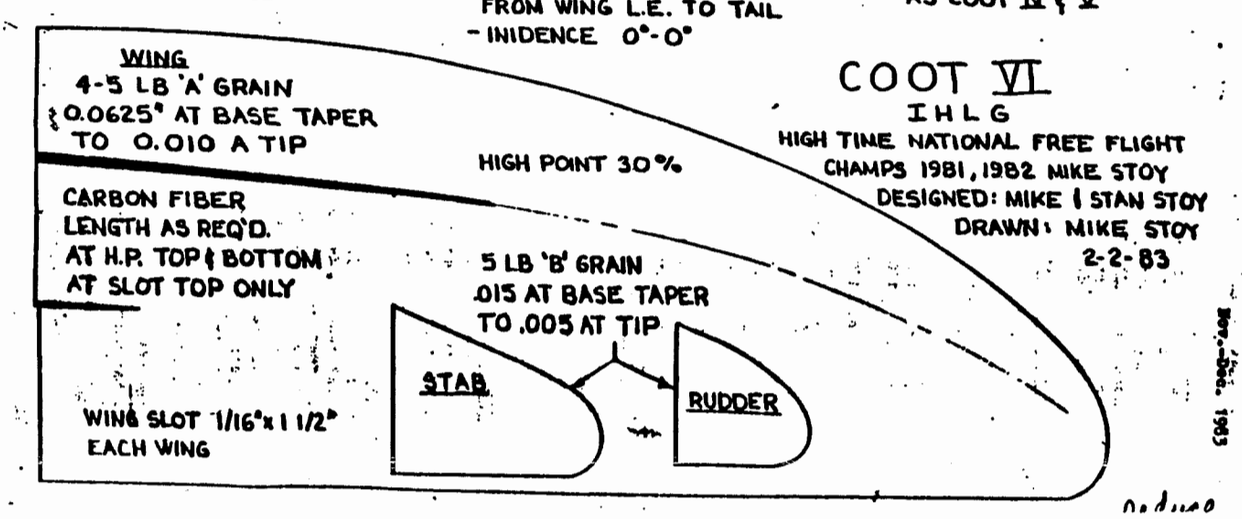
WEIGHT FOR 25 FT. 4-4.5 GMS. FINISHED

AIRFOIL: SMS (SAME AS COOT IV & V)
H.P. 0.135"
UNDERCAMBER 0.0725"

- FINISH: ONE COAT NITRATE DOPE 50% THIN WING ONLY
- ATTACH CARBON FIBER WITH AMBROID
- CG ≈ 50%
- BUILD AND TRIM SAME AS COOT IV & V

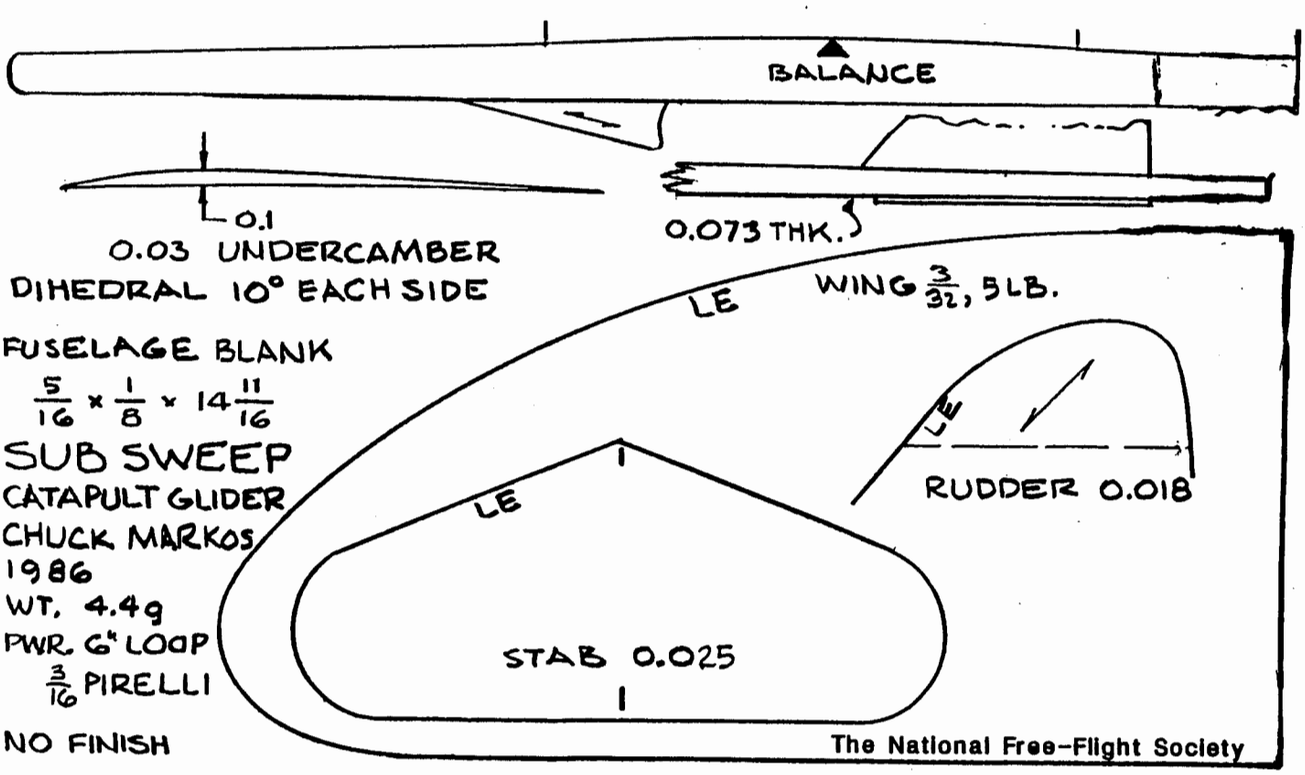


FUSELAGE
- 6 LB. 'A' GRAIN 1/16" THICK TAPER TO 1/32 AT TAIL
- TRIM WING SADDLE TO MATCH WING UNDERCAMBER.
- CARBON FIBER BOTH SIDES FROM WING L.E. TO TAIL
- INIDENCE 0°-0°



COOT VI
IHLG
HIGH TIME NATIONAL FREE FLIGHT CHAMPS 1981, 1982 MIKE STOY
DESIGNED: MIKE & STAN STOY
DRAWN: MIKE STOY
2-2-83

Page 6 Nov.-Dec. 1983



FUSELAGE BLANK
5/16 x 1/8 x 14 11/16

SUB SWEEP
CATAPULT GLIDER
CHUCK MARKOS
1986
WT. 4.4g
PWR. 6" LOOP
3/16 PIRELLI

NO FINISH

The National Free-Flight Society

CATAPULT GLIDER RULES:

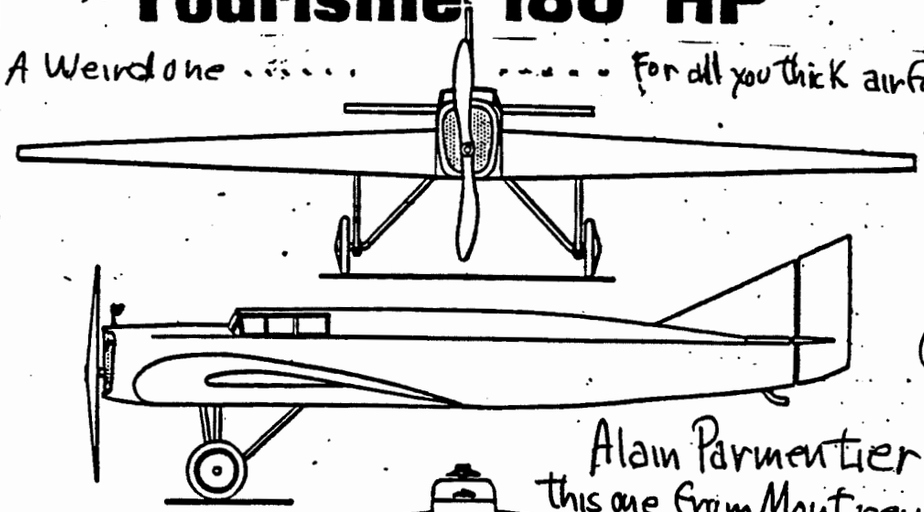
1. Wingspan maximum 12", Chord maximum 3".
2. The catalpult and glider must be hand-held by the same person for launching.
3. Catapult handle maximum length 6".
4. Best 2 of 9 launches wins.

We reprint Chuck Marko s mighty "Sub Sweep" which holds the World Record 153.2 sec. for 2 flight total set at Johnson City 1989. His high ceiling version weighed about 6 1/2 grams.

Just when you thought you had seen all the Farmans:

LE MONOPLAN FARMAN
Tourisme 180 HP

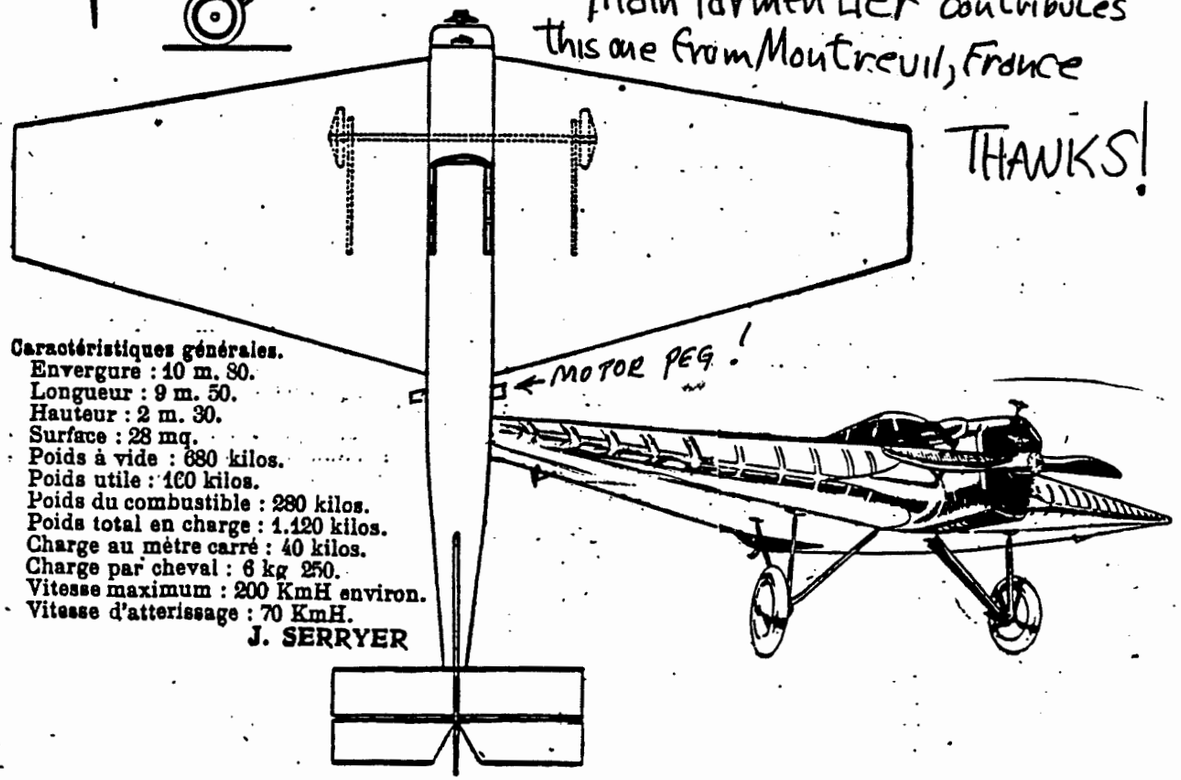
A Weirdone ..... For all you thick airfoil fans.



A PLANE WORTH MODELING (IF YOU LIKE WEIRD)

Alain Parmentier contributes this one from Moutreuil, France

THANKS!



Caractéristiques générales.
Envergure : 10 m. 80.
Longueur : 9 m. 50.
Hauteur : 2 m. 30.
Surface : 28 mq.
Poids à vide : 680 kilos.
Poids utile : 100 kilos.
Poids du combustible : 280 kilos.
Poids total en charge : 1.120 kilos.
Charge au mètre carré : 40 kilos.
Charge par cheval : 6 kg 250.
Vitesse maximum : 200 KmH environ.
Vitesse d'atterissage : 70 KmH.

J. SERRYER

ISSUE 159





ANOTHER FARMAN WORTH MODELING FROM ALAIN PARMENTIER - MAMA'S MAN IN FRANCE.

Construction :

Ailes en deux parties, soutenues par des tubes de duralumin profilés.

Fuselage coque fermé par des couples caissons et un revêtement nervuré, en contre-plaqué. L'habitacle comprend deux places à double commande et strapontin.

Train à amortisseurs oléo-pneumatiques ; pneu de 650×100.

L'appareil peut être équipé de tous les moteurs de 100-150 CV environ, en étoile et à refroidissement par air. Il est actuellement muni du moteur Salmson 120 CV.

Deux réservoirs d'essence en charge dans les ailes (total : 150 litres) et un réservoir d'huile de 10 litres.

Prix de la cellule : 45.000 francs.

Caractéristiques (moteur Salmson 120 CV) :

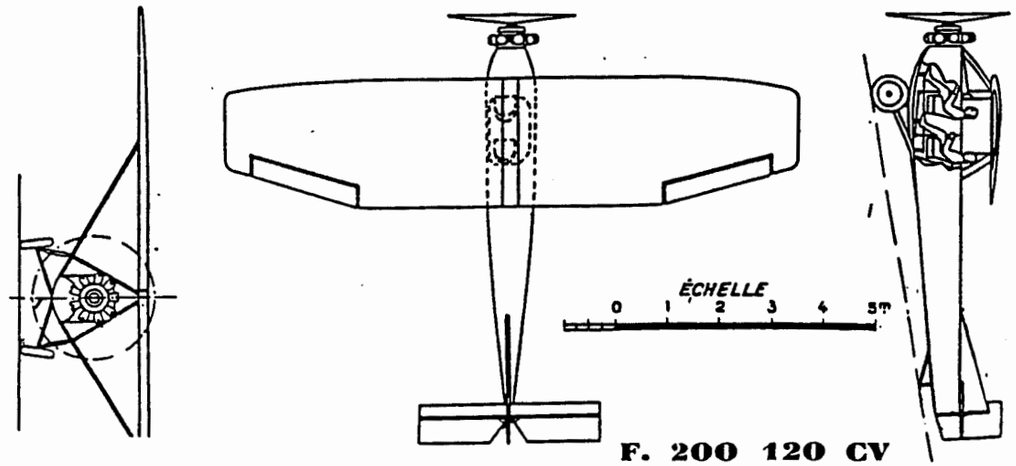
Puissance	120 CV
Envergure	11 m.
Longueur	9 m.
Surface	25 m²
Poids à vide	620 kg.

Cet avion de tourisme qui peut être utilisé également pour l'école, la poste, la photographie aérienne, comme avion estafette ou comme avion de bord, est un monoplan semi-cantilever, construit en bois et duralumin et toile, qui dérive de l'appareil à conduite intérieure F 190.

Performances

Vitesse au sol	155 km./h. à 185
Vitesse à 1.000 m.	150 km./h. à 182
Vitesse à 2.000 m.	140 km./h. à 176
Vitesse commerciale	140 km./h.
Montée à 1.000 m.	12'
Montée à 2.000 m.	28'30"
Plafond théorique	3.100 m.
Rayon d'action	500 km.
Roulement au départ	200 m.
Roulement à l'atterrissage	160 m.
Consommation d'essence	35 lit. à l'heure

L'AVION DE TOURISME FARMAN



F. 200 120 CV

#159

15 July 1993
Hi Doc!

Just got your latest (great as usual) legendary newsletter. Reminded me I have not been in touch for some time. Lordy, how the time flies when you're having fun. Maybe I'll even get time to build a model airplane one of these days. Just got a twin pusher I made for the San Diego Aerospace Museum last year back. Wouldn't fit in their showcase. Instead of chiding them gently for putting mew through all the fun of making the thing, I smiled and remade one 1/2 scale. Had Sandy Peck not have been the person that asked me to do it , I might have been more expressive. Guess I'll donate the full-sized one to the Porterville Historical Museum. They could use a little livening up.

Son (in Army) just married a girl from Miami Beach this Spring. Car got broken into while they were visiting her parents. I thought you had a nice, safe, All-American City? Sounds just like L.A. to me... Except in L.A. they speak Spanish...Haw-w-w-w-w! Thermals...

Bill W

"COTTAGE WINGS" MAIL ORDER SOURCES FOR COMPUTE, CURRENT LIST SEND SASE + #1 LIST IS LONG.

TO: BILL WARNER 1370 W. MONACHE AVE PORTERVILLE CA 93257

NETCRAFT CO.
2800 Tremainsville Rd.
Toledo,OH 43613.
Domedusters report they have telescoping 16 and 20' poles. Free catalog. Note: About five yrs. ago Roger Dunn, a golf store chain, also carried a telescoping pole for ball retreiving that is fine for low-ceiling work(and cheap,under $10.on sale.)

NFFS Publications/Supplies
For a list of NFFS supplies and publications including British FF Forums, send a SASE to Fred Terzian,4858 Moorpark Av.,San Jose, CA 95129.

SCHULTZ SCALE PLANS
910 Broadfields Dr.
Louisville, KY 40207
Domedusters lists him as a source of Oldtimer scale plans. SASE.

SKYBLAZER
P.O.Box 33
Ozone Park, NY 11417
Vicki Alu, acc. to the Domedusters, sells fun flier kits, plans, and accessories. SASE.

WILLIAMS,PETER
13 Southminster Rd.,
Cardiff, So. Glamorgan
CF2 5AT WALES
ENGLAND
tel:(0222)-490501

John Fredrickson sent me the nine page catalog of plans this gentleman carries (prices average about one and a half British pounds). Lots of scale models from Drome, Aeromodels, Airdya, Astral, Frog, Keil...has afew Jetex scale jobs, too. Send two dollar bills for the list.

YESTERYEAR PLAN SERVICE
3517 Kristie Dr.
Erie, PA 16506
Domedusters lists this as having otdtimer scale plans. SASE Interesting.

ALSO FAC NEWS

ISSUE # 139 GREAT TRIM ADVICE!

MINNEAPLOIS MODEL AERO CLUB · Jan - Feb 1991 VIA · OAKLAND CLOUD DUSTERS

CIRCLE TRIM

by Aaron Peterser

For several years I've been exploring the Circle Trim flight adjustment system for rubber-powered (and now electric) sport and scale models. To begin with, I wanted a scheme that would (a) give a good, solid, predictable procedure, (b) allow me to fly in confined spaces when desired -- gyms, armories, city parks, schoolyards, etc., and (c) produce good contest results indoors and out. All objectives have been met. I can trim most new models quickly and efficiently. I can fly in small spaces (when the wind is down). Using Circle Trim, I have won 10 straight local outdoor Embryo Endurance events and have attained a 97.8-second contest flight under a 30-foot ceiling with an Ord-Hume 7 Walnut model that weighs 20 gm. without rubber. Maximum climb or steady low cruise: it works for both.

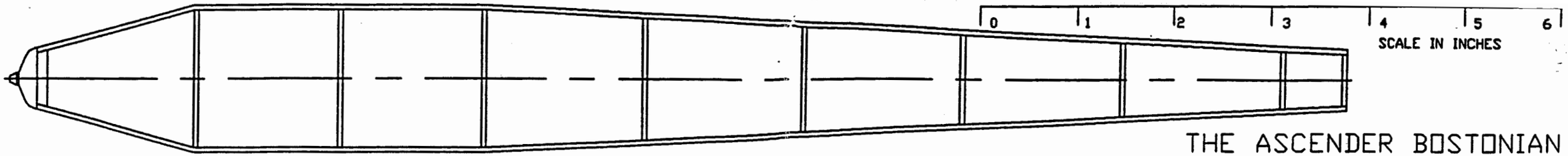
The basics of Circle Trim: (1) wing wash (vs. turn) to control bank angle, (2) rudder offset to establish the cruise/glide turn, (3) forward CG and matching (usually generous) decalage, and (4) thrust offset to control power climb and turn as necessary. This system is hardly new. The 1933 Jimmie Allen Bluebird plan shows about ¼-inch of wing wash to offset torque -- the keystone of the whole idea. One can find good references all through modeling literature -- Dick Korda, Henry Struck, Butch Hadland, Bill Warner, Wm. McCombs, Tonda Alfery -- all these experts (and many others) have laid it out at one time or another. Power fliers use washin to stabilize climb turn. The famous Square Eagle P-30's success is partly based on Circle Trim. Many of you are now using Circle Trim, even if it's a matter of pasting a drag flap onto a wing T.E. So -- I have invented nothing, but maybe I can offer a few little slants on the subject that might be of use. One thing's sure -- I'm sold on it!

Many construction articles (and some kit instructions) admonish you to build everything straight and to steam out any and all warps. On that point they are clear, but when it comes to flight trimming, things muddy up very quickly. Often it seems given that if the precious model is only built "correctly," it will fly with little or no trouble at all. We all know that is not the case! Indeed, a normal sort of model can be trimmed to fly OK in a large circle or in a large "S" pattern just by getting it balanced properly, maybe giving it some downthrust, and tweaking the rudder to the right to offset torque. Maybe some hot breath on the stab. But those aren't the kinds of patterns I want, indoors or out. They take up way too much room, and the model either hits a wall or grows smaller and smaller in the distance as it heads for the trees. I like to see my outdoor planes fly, especially the scale jobs. I want them close at hand, overhead, with the sun shining through the tissue. (Not that an efficient high-powered model like an Embryo can't get really high in a hurry with Circle Trim. It most certainly can.)

Circle Trim starts in the building phase. Several factors ought to be incorporated right in the structure. The first thing to decide is which way you want the model to turn -- left or right. Indoors, I definitely believe that left is better. Right turns get* you to the ceiling too fast. Outdoors, I don't think it makes any big difference, at least for high-wing models. I've flown sport models and old-timers that had big climbs, nice glides, and good thermaling behavior in both directions, right and left.

EVERY NOW AND THEN A REALLY FINE TRIM ARTICLE APPEARS - REMEMBER BUTCH HADLAND'S? . . . AND NOW AARON PETERSEN.

* RIGHT TRIM IS GOOD FOR JOHNSON CITY - YOU NEED THE ALTITUDE.

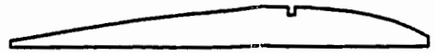


THE ASCENDER BOSTONIAN

A SEVEN GRAM CANARD
BY CARL HEDLEY 1/4/93

CONSTRUCTION: 1/20" SQ. FUSELAGE & WING STRUCTURE, 1/32" RIBS, 1/16" SQ. CANARD.

ISSUE 1 FEB FALL '93



RIB PATTERN, TYP.

1/32" SHEET CANARD SUPPORT EACH SIDE OF FUSELAGE

7° (RELITAVE TO WING)

WINDOW AREA

1/10" X 1/20" L.G. SUPPORT, TYP.

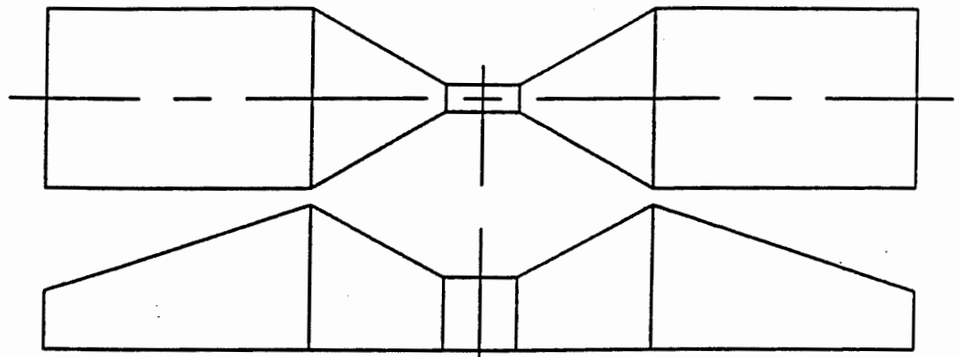
1/20" LAMINATED REMOVABLE ~~NOSE~~ BLOCK TAIL

AN ORIGINAL MMMA FLIGHT TESTED PLAN BY CARL HEDLEY

.020" ø, TYP.

ONE WHEEL IN BACK,
TWO IN FRONT.
2 PLY 1/32" BALSA, 1" ø

PROP BLANK FOR
6"ø X 6" PITCH PROP

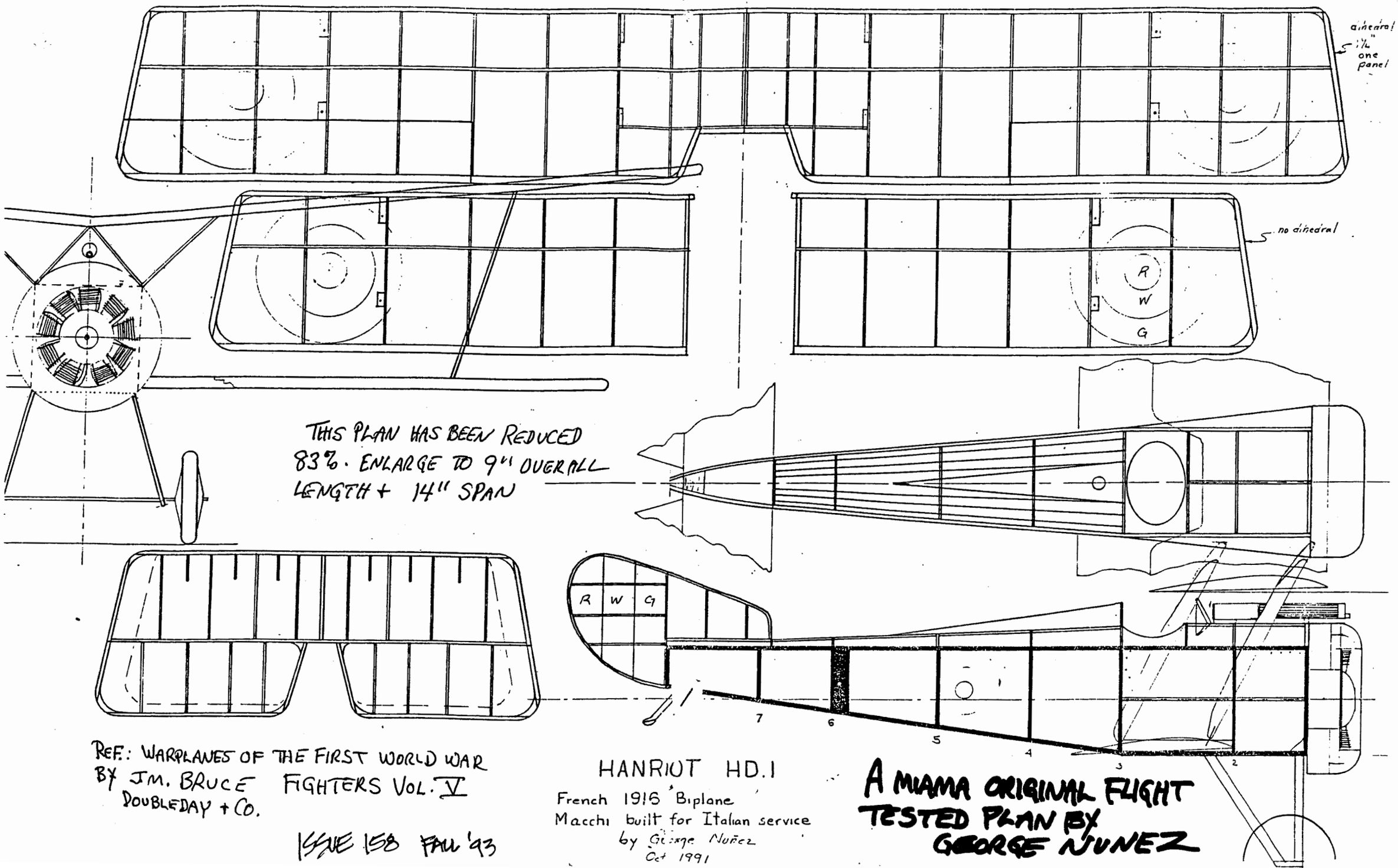


WING

CANARD

DIHEDRAL BREAK

3/4" DIHEDRAL, UNDER END RIB



THIS PLAN HAS BEEN REDUCED
83%. ENLARGE TO 9" OVERALL
LENGTH + 14" SPAN

REF.: WARPLANES OF THE FIRST WORLD WAR
BY J.M. BRUCE FIGHTERS VOL. V
DOUBLEDAY + CO.

ISSUE 158 FALL '93

HANRIOT HD.1

French 1916 Biplane
Macchi built for Italian service
by George Nuñez
Oct 1991

A MIAMA ORIGINAL FLIGHT TESTED PLAN BY GEORGE NUNEZ

RUBBER WON'T SLIP OFF THIS HOOK!

LOOK OUT MICHAEL JORDAN, HERE I COME WITH MY REVERSE S HOOK SLAM DUNK...

Roy O'Mara did a double take when he saw the reverse S hook on my Embryonic Flounder. He asked me to write a little "why" and "how to".

One of the rubber ffr's banes is the tendency of the rubber to climb up the prop hook. Once the rubber climbs up the side of the hook, the hook tends to wobble, creating unwanted friction on the nose bearing and sending the motor into wild gyrations. A lot of your motor's energy is used up making the whole plane shake. The rubber may even ball up, stopping the prop.

The most effective solution I have found is the reverse S hook. That is, it looks like a reverse S when viewed from the back of the nose block. If you inadvertently bend an S instead of a reverse S, your motor will actually climb the hook. Ask me how I know! I use the reverse S hook style on all of my rubber powered free flights.

It used to take me a long time to bend the hook but now I can bend one in less than 30 seconds. I like to use round nosed pliers for the "S" and needle nose for the other bends, but needle nose will work for the whole thing.

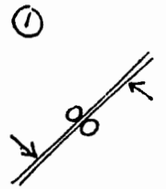
I routinely use 1/32 wire on my Bostonians but this hook can be bent for any size wire. I also use it with 1/16" wire on my P-30's. Obviously, the finer wire is easier to bend.

1. Start with the tips of the pliers pointed toward you and the wire at an angle as shown. With your left thumb pushing and your left index finger pulling, bend the reverse S. The bend should stay in the same plane, that is to say the wire should lay flat on the table when you have bent the S.

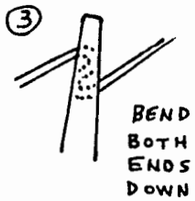
2. The bend should continue past a tangent with the top and bottom of the S. This makes the alignment of the next bends automatic.

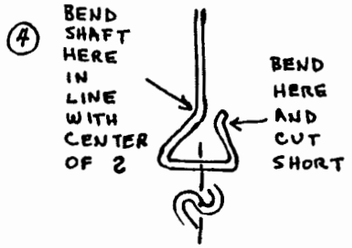
3. Clamp the wire in your needle nose pliers and bend the wire ends away from you. If you bend them toward you, an S hook, rather than a reverse S will be the result. These bends will automatically direct the wire toward the center line of the shaft. The shaft wire is bent to be in line with the center of the reverse S. The short end of the wire is bent away from the shaft to ease insertion of the motor loop onto the hook. This short end is then dressed with sandpaper or a Dremel stone so it does not cut your motor.

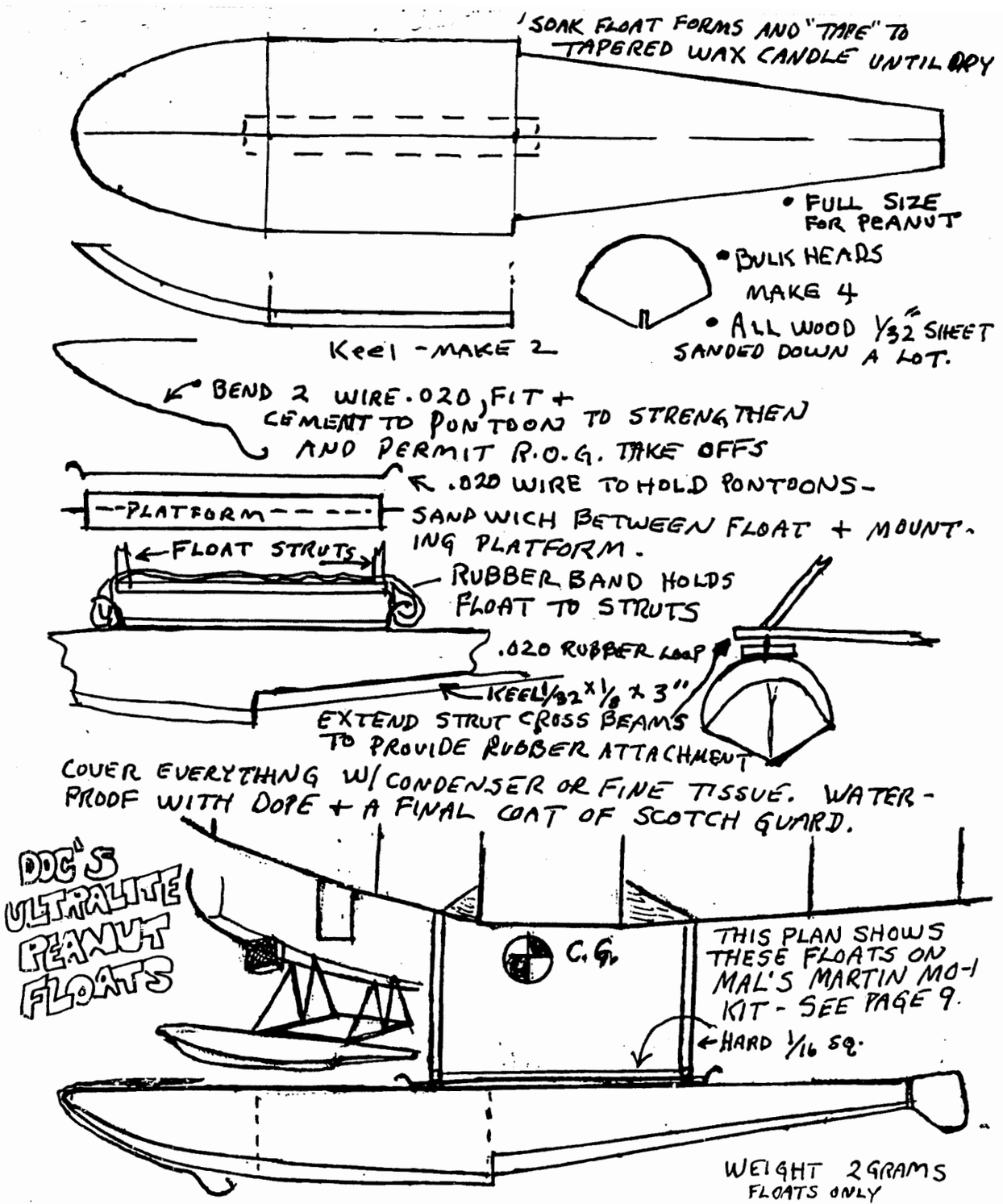
Try a reverse S hook. You will like it.







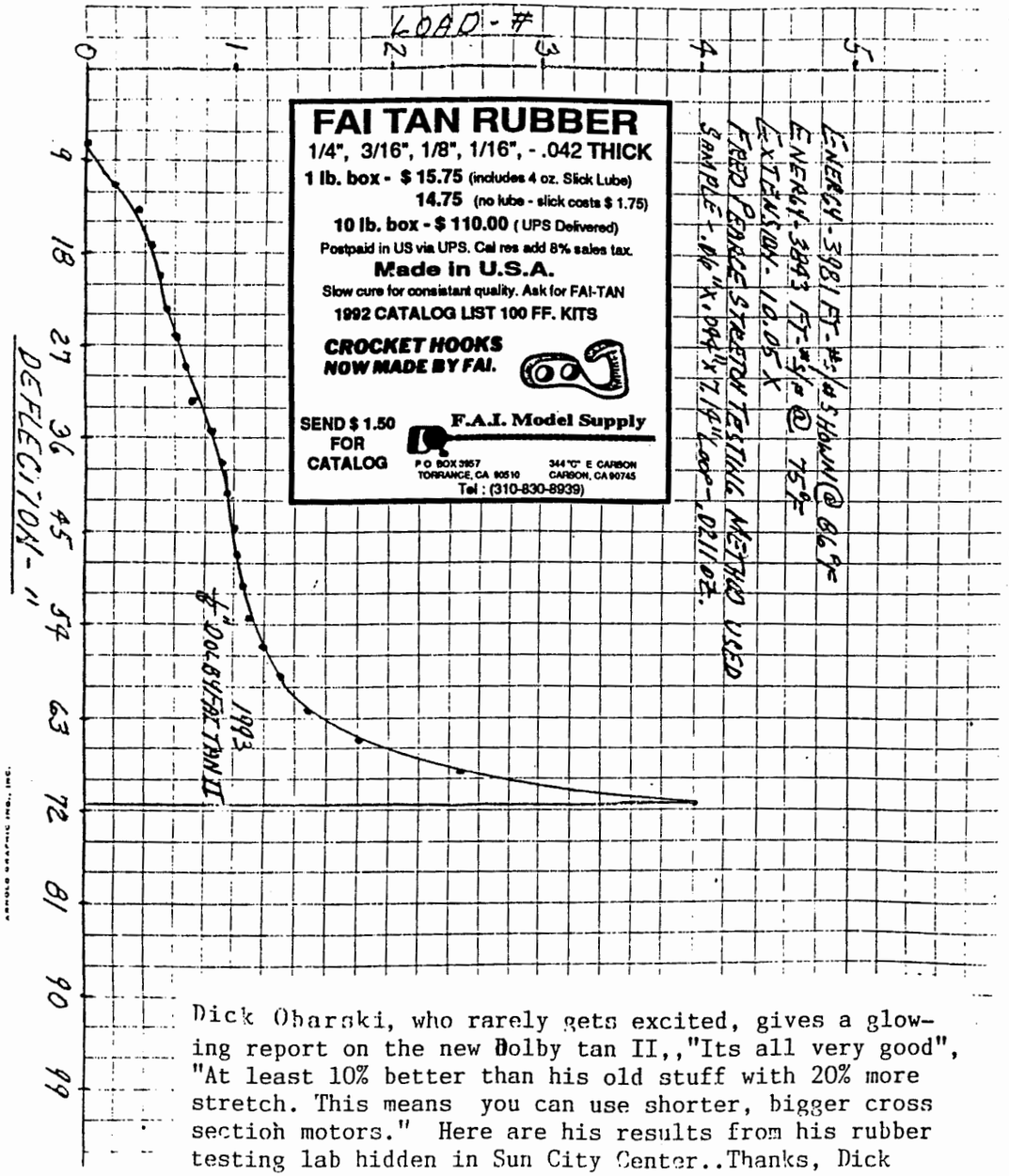




STANDARDS TESTING LABORATORIES INC.

BY RWO DATE 7/11/93 SUBJECT RUBBER ENERGY SHEET NO. 1 OF 1

CHKD. BY DATE TYPICAL 1993 DOLBY TAN II JOB NO.



FAI TAN RUBBER

1/4", 3/16", 1/8", 1/16", - .042 THICK

1 lb. box - $ 15.75 (includes 4 oz. Slick Lube)

14.75 (no lube - slick costs $ 1.75)

10 lb. box - $ 110.00 (UPS Delivered)

Postpaid in US via UPS. Cal res add 8% sales tax.

Made in U.S.A.

Slow cure for consistant quality. Ask for FAI-TAN

1992 CATALOG LIST 100 FF. KITS

CROCKET HOOKS NOW MADE BY FAI.

SEND $ 1.50 FOR CATALOG

F.A.I. Model Supply

P.O. BOX 3957 TORRANCE, CA 90510

344 "C" E. CARSON CARSON, CA 90745

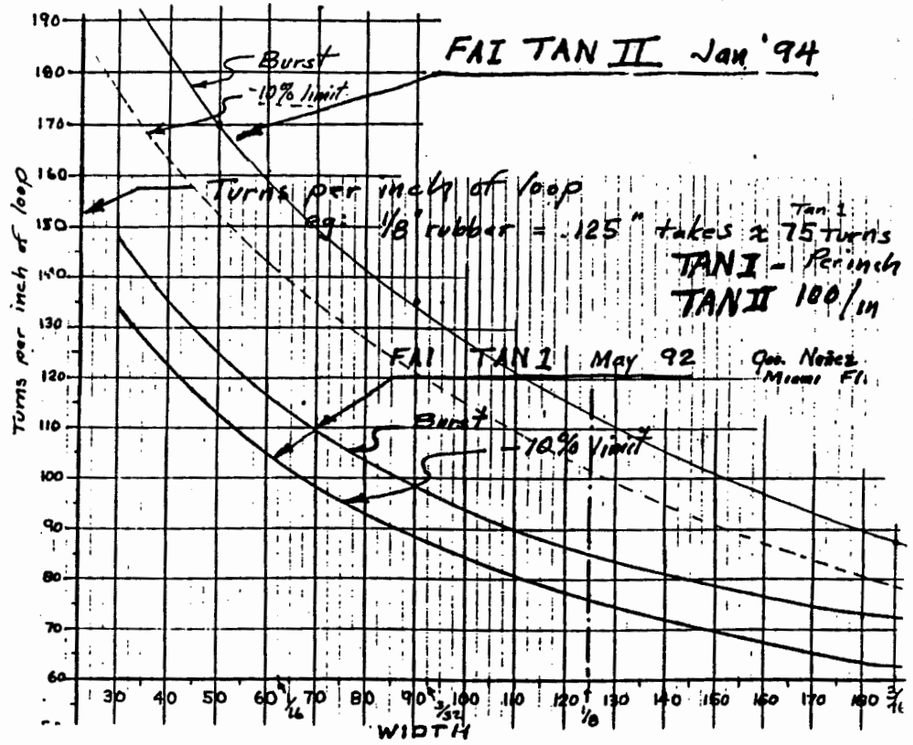
Tel : (310-830-8939)

Dick Oharski, who rarely gets excited, gives a glowing report on the new Dolby tan II,,"Its all very good", "At least 10% better than his old stuff with 20% more stretch. This means you can use shorter, bigger cross section motors." Here are his results from his rubber testing lab hidden in Sun City Center..Thanks, Dick

RUBBER POWER FLYERS ARISE. THEERA OF TAN II IS UPON US. Get out your old crate, put in some Tan II and get your personal best flight.

SUMMARY, MAX. TURNS PER 1" LOOP:

1/8" — 110
.110 — 120
.100 — 126
.090 — 132
.080 — 138
1/16" — 150
.050 — 158
.040 — 165
.030 — 178



GEORGE NUNEZ JUST WORKED OUT THIS NEW CHART

FAI TAN RUBBER

1/4", 3/16", 1/8", 1/16", - .042 THICK

1 lb. box - $ 15.75 (includes 4 oz. Slick Lube)

14.75 (no lube - slick costs $ 1.75)

10 lb. box - $ 110.00 (UPS Delivered)

Postpaid in US via UPS. Cal res add 8% sales tax.

Made in U.S.A.

Slow cure for consistant quality. Ask for FAI-TAN

1992 CATALOG LIST 100 FF. KITS

CROCKET HOOKS NOW MADE BY FAI.

SEND $ 1.50 FOR CATALOG

F.A.I. Model Supply

P.O. BOX 3957 TORRANCE, CA 90510

344 "C" E. CARSON CARSON, CA 90745

Tel : (310-830-8939)

THIS AD IS OLD — I THINK THE PRICE IS A BUCK MORE NOW —

Doc SPECIFY TAN II

Via the Brainbuster Newsletter

AMA elections -

Dave Brown was returned to the office of Executive Vice-President

RESULTS:

Dave Brown	- 10,496
Jim McNeill	- 5,371
Write ins	- 1,347
Total	17,214

(7)

· COLOR · SCHEME ·
WING & TAIL – YELLOW
FUSELAGE – BLACK & YELLOW
STRUTS – BLACK

POSITION OF WING
STIFF PAPER
CELLULOID OR CELLOPHANE
HEADREST & TURTLE BACK – STIFF PAPER
STABILIZER
CORBEN
13697
PROP SHAFT
WING STRUTS
MOTOR
REAR HOOK
TAIL SKI
HARDWOOD THRUSTBEARING
RADIATOR
YELLOW
· SIDE · VIEW ·
STABILIZER MADE IN ONE PIECE
DIHEDRAL ANGLE ½ INCH
PROPELLER
WING STRUTS ⅛" × ⅛"
NOSE BLOCK
STIFF PAPER
KNEE ACTION WHEELS
· FRONT · VIEW ·

· FUSELAGE · FORMERS ·
– NOTCHES RECEIVE LONGERONS

A CLASSY "DIME SCALE" – BUT WILL IT OUTPERFORM A 1934 COMET CURTISS ROBIN?

FROM "TAILSPIN" – BAY STATE FAC SQDN.
MIKE NASSISE
22 GREENFIELD ST.
S. EASTON, MA
02375



Note the head rest fairs into the tail group, adding to the performance and appearance of this racy little plane.



The details of the cockpit and windshield are shown here. Hand hold on the wing makes it easy to get in or out.