DURABLE

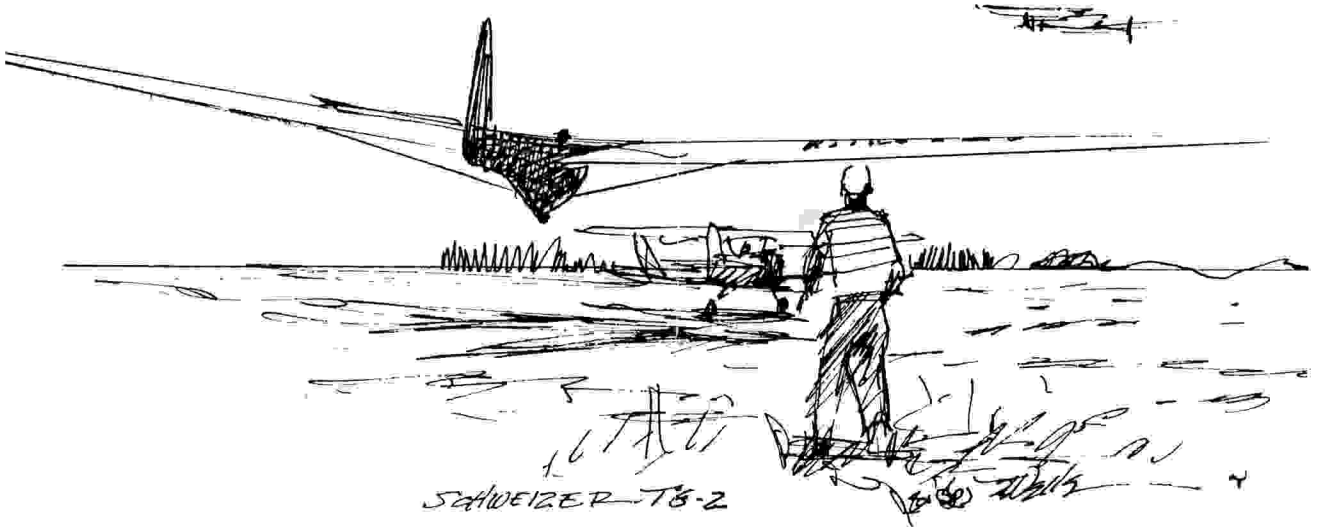
THE HANGAR PILOT

MIAMI INDOOR AIRCRAFT MODEL ASSOCIATION
MIAMA

19TH YEAR OF PUBLICATION-
INDOOR ISN'T FOR EVERYONE

ISSUE 133

- RESULTS - MEET 5
- PISTACHIO FIKE, GUPPY
- FLA. STATE RECORDS
- LIST OF FF COTTAGE INDUSTRIES
- FUDGE FACTOR for POSTAL MEETS



SCHWEIZER TG-2

NEXT MEET: PISTACHIO INTERGNATS + FLY IN - MIAMI DADE S. COLLEGE APRIL 22 9 TO 5

NEXT CONTEST - MAY 19,20

MAC DILL AFB - TAMPA, FL

BRING YOUR PISTACHIO OR ANYTHING ELSE
TO MIAMI DADE SOUTH COLLEGE APRIL 22, 9-5

(1)



"LIKE A LETTER FROM HOME" WHEAN

THE HANGAR PILOT

Is published 8 (or 9) times a season for a bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association,) AMA Club 986, is one of two active all indoor free flight clubs in AMA. Our Mottos: "It must be fun.", and "Indoor isn't for everyone." For $12.50 a year you will receive all copies. We solicit your contributions since we are always running out of material. Letters, plans, 3-views, articles, gripes, and Money to: Dr. John Martin Pres./Editor. 2180 Tigertail Ave. Miami, Fla. 33133 USA Phone: 305-858-6363 We want to hear from you!!! Send material!!!

NOTE NEW $12.50 ANNUAL RATE

MIAMA MEET #5 MAR 31/APR 1 MAC DILL AFB

What a contrast. We almost didn't have meet #5, and it turned out to be one of the best ever.

8 AM Sat. March 31 I arrive at hangar 3 after a torrential all nite rain. Big doors were open, floor shoe sole deep in water puddles, six aircraft (3 F-16's) parked in center of floor, and Sgt. Barnes and his crew at operations KNEW NOTHING ABOUT A MODEL AIRPLANE MEET, in his hangar.

What the XDZLXM! The easy solution was to cancel out the whole thing. It almost happened. Fortunately the Sarge got on the phone, Col. Bill Criss arrived, we found a bunch of squeegees, and a couple of corpsmen used a tractor to pull the planes to the side of the hangar, and shut the big doors. By 11 the meet was go..very hairy. We were finally flying with about 80 million bucks worth of Uncle Sam's aircraft for decoration. We were blessed from here on out. The predicted week end rain didn't arrive and the floor dried up completely. Sunday the flying was perfect.

Ninteen flyers showed lots of tallent and each of our 10 indoor classes was hotly contested. It sure is nice when there is a field of 6 Or 7 in an event, and everyone is flying like Moody's goose. What fun! From MO Dick Hardcastle showed up with the Mrs., andsome planes after an eight year hiatus. He set the new easy B State Record! Kieth Fulmer came in from Indiana, and John Barker was here from Georgia. We invite you to study the meet results for the many exciting competitions and fime flying. Also a lot of unfamiliar names. Welcome to Capt. Jake Larson, and Sidney Gilbert who entered a MIAMA meet for the first time..We hope to see more of you! Also Tom McCoy's first time.

The WW II FAC mass launch had 7 entries. It came down to Tudor's Heinkel Vs. Martin's Bush Avenger. Doc's Avenger hit a light pole late in the fly off and John Tudor won with a fine 1:14 flight.

NEXT MEET WE WILL DO WWII AGAIN. This type of model is REALLY exciting and capable of good flights. Get out your Battle of Brittain models....It's the 50th anniversary this Summer

RESULTS - MEET 5 MACDILL AFB CD DOC MARTIN

(2)

Peanut Scale

		Scale	two best fly		total
1.Wayne Trivin	14-Bis	105.1	1:11.1	1:13.3	177.2
2.John Martin	Bleriot Canard	86.8	1:22.6	1:26.7	171.4
3.George Nunez	Turbo-Beaver	86.8	1:22.8	1:25.4	170.9
X " "	" " Sop. Tripelane	108.0	1:04.4	:54.0	167.2
X.John Martin	Waco Seaplane	103.2	1:04	1:01.8	166.0
4.Walt Everson	Waco E	82.0	1:08.4	1:05.5	149.4
5.Millard Wells	Eastbourne Mono	78.0	1:02	:59.0	138.1
6.Carl Hedley	Stinson 125	76.8	1:01	1:01	137.8
X.M. Wells	Owl	89.0	45.0	50.0	136.5
X.M. Wells	Polish Fighter	79.2	53.0	56..4	133.9
8.Tom McCoy	Contestar	86.1	23.4		99.7
7.Bill Stoutenberg	Nesmith Cougar	68.0	43.0	43.0	111.0
9. Tom Flannagan	Mustang	75.2	11.0	10.0	85.7

CAT III

FAC Scale

★1.Doc Martin	Bleriot 25	69	1:38.6	146.1
2. Geo, Nunez	Rumpler	75	1:02	136
3.John Tudor	Heinkel	58	1:14	125.5
X J. Tudor	Curtiss Robin	52	1:18	121.0
X G. Nunez	AeroncaK	62.5	1:23.4	134.2
X J. Tudor	Avro I	73	30.0	103
4.Millard Wells	Huntington	45	55.5	99.5
5.Jake Larson	Avenger	69.5	13.8	83.7

BOSTONIAN:

		Charis.	
1.Wayne Trivin	Living Colors	1.12	388.6
2.Dick Obarski	FOO 2-U2	1.15	315.1
3.Rich MacEntee	Mod-Cat	1.13	251.9
4.Kieth Fulmer	Canard	1.14	261.6
5.Doc Martin	Ugless I	1.12	224.1
6.John Barker	Perri-Korda	1.09	218.3
7.John Tudor	Boston-foiler	1.10	168.7
8.Tom Flanagan	Pup	1.10	154.4
9.Carl Hedley	Blimpy	1.12	147.3

EMBRYO ENDURANCE Total of 3 flights

1.Wayne Trivin	6:48.2
2.Doc Martin	6:42.0
3.Rich MacEntee	6:12
4.Walt Everson	4:29
5.Bill Criss	3:07.3
6.Bill Stoutenburg	2:22

PENNY PLANE:

1.George Leffler	9:34
2.Rick MacEntee	8:16.8
3.Dick Obarski	8:05.8
4.Wayne Trivin	7:54
5.John Barker	7:47

COCONUT SCALE

1.Doc Martin BMW 20b	1:16.5
2.Geo. Nunez Taylorcraft	1:11

NO-CAL SCALE

1.Doc Martin Dayton W.	1:43
2.W.Everson Staggerwing	1:29

MANHATTAN:

1.Millard Wells	5:30.7

FEDERATION ROG

1.Wayne Trivin	4:33.6
2.Dick Obarski	4:14
3.Geo. Leffler	4:01
4.Walt Everson	3:05

GLIDER..CATAPULT

1.Wayne Trivin	44.2	46.8
2.Kieth Fulmer	44.4	45.7
3.Dick Obarski	42.4	45.9

Easy B:

1.Dick Hardcastle	15.08 NEW
2.Dick Obarski	13:48 RECORD
3.Wayne Trivin	12.55 (NO)
4.John Barker	10:16
5.Rick MacEntee	9:20
6.Millard Wells	9:17
7.George Leffler	7:20
8.Tom Flanagan	3:13

★ - Correction - THIS RECORD IS 19:05 - OBARSKI - 1/89

FLORIDA STATE RECORDS AS OF MAR. 1990

CATAGORY I: Set at Youth Fair (Up to 26'3")

FAC Scale: Doc Martin	116.4	(11/89)
COCONUT : John LeBlanc	1:05	(11/89)
PISTACHIO: Millard Wells	1:23.1	(4/86)JaiAlai
NO-CAL: Doc Martin	1:31	(11/89)
FAC SCALE: DOC Martin	116.4	(11/89)
NOVICE PENNY Nancy Beitz	7:59	(5/89)
EASY B: Stan Chilton	12:43	(2/86)
H.L.Stick: Roman Szymula	14:35	(10/74)
ROG Stick:Walt Everson	5:23	(3/83)
FED. ROG : Doc Martin	2:46.7	(11/89)
PAPER STICK: Gary Myers	8:25	(4/73)
MANHATTAN: Walt. Everson	3:54	(4/84)
H.L.GLIDER:Don Bal	1:12.4	(2/83)
BOSTONIAN: Carl Hedley	135.8	(11/89)
EMBRYO : Walt Everson	175.0	(11/89)

HOW DO THESE COMPARE WITH YOUR PERSONEL BEST?

BUSH AVENGER CANOPY

AVAILABLE - KIT CANOPY PRINTED ON THIN VINYL. BEAUTIFUL, LIGHT RESULT. SEND $2.50 TO MIAMA.

HELP! I'VE LOST LETTER FROM CANOPY SUPPLIER! SEND ME YOUR ADDRESS!

CATAGORY II:(26'3" to 49'2½") St.Pete Coast Guard Hangar,Miami Dade S.College

FAC SCALE: Jim Miller 14-Bis	157.7	(2/90)
COCONUT:1:08 Doc Martin BMW 20b		(2/90)
PISTACHIO:Dave Aronstein ANT-25	2:21.5	(5/87)
NO-CAL: Doc.Martin Dayton	2:07	(9/89)
NOVICE PENNY: George Leffler	9:40	(2/90)
EASY B: Dick Obarski	13:38	(2/90)
PENNY: Tony Becker	8:29	(2/86)
PEANUT SCALE:Jim Miller 14-Bis	187.9	(2/90)
ROG Stick:Dick Obarski	8:10	(10/87)
FED ROG: Dick Obarski	4:57	(2/90)
MANHATTAN: Millard Wells	5:03	(2/86)
H.L. Glider: Don Bal	82.4	(2/83)
CATAPULT GLIDER:Wayne Trivin	88.7	(9/89)
BOSTONIAN: Wayne Trivin	387.8	(2/90)
EMBRYO: Rich MacEntee	352	(2/90)
ORNITHOPTER:Frank Kieser	6:45	(2/87)

MORE CAT. III

H.L.GLIDER: Don Bal	1:58.2	(1/81)
CATAPULT:Wayne Trivin	100.7	(5/89)
ORNITHOP.:Frank Kieser	10:13	1/88
HELICOP.:G.Underwood	4:40	(1/89)
PAPER STK:R.Obarski	19:22	(12/89)
H.L.STK(FAI)R.Harlan	23:34	(4/79)
ROG STK: Stan Chilton	13:41	12/89

PEANUT SPEED:
Millard Wells 8.6 Sec
UNLIMITED SPEED Doc Martin 8.6

All of these are Open records Jr/Sr records are also kept.

CATAGORY III(49'2½" to 98'5")Goodyear Hangar,MacDill AFB,DELTA Hangar.

★FAC SCALE:Doc Martin Drwesweiki	144.1	(4/87)
COCONUT: Doc Martin Messerschmitt	1:24.9	(12/89)
PISTACHIO:Mike Arak	1:25	(1/88)
NO-CAL:J.' Voorhees Farman Postal	2:47	(12/89)
NOVICE PENNY: Walt Everson	10:45	(5/86)
PENNY: Roman Szymula	10:58.8	(4/80)
PEANUT SCALE:R.MacEntee Fike	183.0	(4/89)
MANHATTAN: Walt VanGorder	9:32	(1/89)

BOSTONIAN:W.Trivin	430.3	12/89
EMBRYO: Wayne Trivin	420.8	""
MANHATTAN:W. VanGorder	9:32	1/89
EASY B: R.Obarski	19:05	1/89

★ = NEW RECORDS SET AT MEET 5 - SEE PAGE 2

SUPPORT OUR COTTAGES 

Chet Lanzo	1485 Lester Road	Valley City, OH 44280	(216) 483-4225	Chet Lanzo	OT plans, R/C & FF.
Bob Larsh	45 S. Whitcomb Ave.	Indianapolis, IN 46241		Bob Larsh	OT and Nostalgia plans.
Al Lidberg	614 E. Fordham	Tempe, AZ 85283	(602) 838-4743	Al Lidberg	Plans for FF scale & sport, for rubr, CO2 & glow.
Ernie Linn	3505 E. Mt. Vernon	Wichita, KS 67218	(316) 687-9552	Ernie Linn	'38/'39 Wake Plan.
Dick Lyons	552 Camino Concordia	Camarillo, CA 93010		Dick Lyons	.020 Rep. Kerswap plan.
M&G Engines	PO Box 6026	Denver, CO 80206		Les Payne	OT engines, Ign. conversions.
X Mace Model Aircraft Co.	359 S. 119th East Ave.	Tulsa, OK 74128		Don Mace	EZB kit, EZB, Pistachio plans.
J. H. Maxwell	14 Upper Craigs	Stirling FK8 20G, Scotland		Joe Maxwell	Solid balsa wings, wing and prop molds, ribs, prop blanks.
Micro Model Eng'g.	1301 W. Lafayette	Sturgis, MI 49091		Woody Bartell	OT ign. engine hdwr.
XX Micro-X	Box 1063	Lorrain, OH 44055		Jerry Skrjane	Indoor kits, matls, tools, etc.
Midway Model Co.	PO Box #9	Midway City, CA 92655	(714) 895-6569		OT full and partial kits.
The Model Box	12 Cook St.	Rowayton, CT 06853	(203) 866-2426	Joe Wagner	Supp., kits.
Model Covering Co.	2320 Ocean Parkway	Brooklyn, NY 11223	(7180 375-1288		Silk by the running yd.
Model Engine Specialties	34W883 S. James	St. Charles, IL 60174	(312) 888-2289	Bob Oge	Engine rework, chroming.
The Model Museum	3724 John L. Ave.	Kingman, AZ 86401		Gordon Codding	Scale & obscure A/C 3 vues; OT gas, scale & pnut plans.
Walt Mooney	PO Box 231192	San Diego, CA 92123		Walt Mooney	Peanut plans.
Gil Morris	2810 Brackley Rd.	Columbus, OH 43220	(614) 451-2554	Gil Morris	Radio Homing System.
T. F. Morrison	PO Box 10658	PO Box 10658		T. F. Morrison	Cyclone repros.
XX MRL Model Research Labs	25108 Marguerite Pkwy B-160	Mission Viejo, CA 92692		Curt Stevens	C-Graphite, Kevlar, Boron, .06 mil Mylar.
Mike Myers	911 Kilmary Lane	Glendale, CA 91207		Mike Myers	OT plans of C.E. Bowden.
Tony & Addie Hobby Lobby	3512 W. Victory Blvd.	Burbank, CA 91505	(818) 842-5062	Tony Naccarato	Best retail hobby shop in S.Cal? Also mailordr.
The Netcraft Co.	2800 Tremainsville Rd.	Toledo, OH 43613			Telescoping FG poles.
NFFS Plans	10115 Newbold Dr.	St. Louis, MO 63137		Bob Lipp	Plans.
Oldtimer Model Supply	PO Box 7334	Van Nuys, CA 91409		Ken Sykora	OT FF matls, hdwr, kits, plans.
Oliver Model Products	2213 El Cejo Circle	Rancho Cordova, CA 95670	(916) 363-2017	Ken Oliver	C-Graphite components.
Jim O'Reilly	4760 N. Battin	Wichita, KS 67220	(316) 744-0851	Jim O'Reilly	This list.
Peck-Polymers	PO Box 2498	La Mesa, CA 92041	(619) 442-4636	Bob & Sandy Peck	Scale, rubr, elec.O, kits, plans, supplies.
Pharis Models	PO Box 804	Folsom, CA 95630	(619) 985-3569		FF kits.
John Pond OT Plan Svc.	PO Box 90310	San Jose, CA 95109-3310	(408) 292-3382	John Pond	OT plans.
Puti's Hangar Products	5695 Marshall Rd.	Dayton, OH 45429	(513) 439-2069	Norm Poli	Molded fiberglass props, std & custom.
Premier Co.	PO Box 8264	Long Beach, CA 90808		Sal Taibi	Balsa
RGOA Poles	936 Hamal Dr.	Littleton, CO 80124		Rick Pangell	21' f'glass, telescop pole, 6 sectn.
Scale FLight Model Co.	630 Fairway Lane	Bloomington, IN 47401			Comet plans, kits and printwood.
Schlueter Free Flight Co.	3508 Poinsettia Ave.	Manhattan Beach, CA 90266			FF sport rubber kits.
Schmidt Custom Kits	11948 Franklin Blvd.	Elk Grove, CA 95624	(916) 685-3627		OT, scale, nost; kits.
Seaglen Model Co.	Box 123	Plympton, MA 02367			OT scale and cabin rubber kits.
Simplex Miniature Engines	143 Richmond St.	El Segundo, CA 90245		John Morrill	OT engines, winders
Small Parts, Inc.	PO Box 381736	Miami, FL 33238	(305) 751-0856		Screws, brgs, gears, misc.
Karl Spielmaker	4690 Burlingame SW	Wyoming, MI 49509		Karl Spielmaker	Repro engines.
Stanton Hobby Shop, Inc.	4734 N. Milwaukee	Chicago, IL 60630	(312) 283-6446	Ian Smith	Retail hobby shop, inc. free flt matls, mail ord.
Starline Int'l.	6146 E. Cactus Wren Rd.	Scottsdale, AZ 85253	(602) 948-5798	Sal Fruciano	FF, OT, FAI; kits, hdwr.
Streigler's R/C Supply	5831 McKnight	Houston, TX 77035	(713) 729-5652	Bert Streigler	Repro Orwicks, Elfin diesels.
T&O Research Assoc.	6371 El Cajon Blvd., Ste. 115	San Diego, CA 92115			Repro Edco Sky Devel.
Jim Walston Retrieval Sys.	725 Cooper Lake Rd., SE	Smyrna, GA 30080	(404)434-4905	Jim Walston	Radio homing systems.
X Wilder's Model Machine Wks	2010 Boston	Irving, TX 75061	(214) 253-8404	Bob Wilder	FF, Indoor; Winders, Irl. ends., torquemeters.
Frank Zain	Box 135	Northridge, CA 91324		Frank Zaic	Rubber power hardware.

X England - Small Scale Custom Services The Red House, OXBOROUGH KINGS LYNN, NORFOLK PE 33 9RS - VACUUFORMED SCALE WHEELS, PILOTS, RADIAL ENGINES, CANOPIES

ENGland - K+P ENGINEERING LTD. CASTLE ROAD, ROWLANDS CASTLE, HANTS PO9 6AS K+P ELEC MOTOR (31GM)

ENCLOSED IN THIS ISSUE is a great listing of almost all the present cottage industries that cater to our hobby in one shape or another. Much thanks to Roy Hansen of Los Angeles for this compilation - it is really handy.

X = INDOOR SUPPLIES
XX = BROAD LINE OF GOODS - INDOOR

	77 Products	17119 S. Harvard Blvd.	Gardena, CA 90247	(213) 329-0273	Phil Bernhardt	Ign. engines, parts, supplies.
	Aircraft Data	PO Box 763576	Dallas, TX 75224			Book: "Making Scale Model Airplanes Fly," Peanut plans.
	Argo - USA	3229 Dianora Dr.	Palos Verdes, CA 90274	(213) 377-6186	John Targos	Replica Orwick 64, 73; Elfin 2.5
	George Batiuk	PO Box 15533	San Luis Obispo, CA 93401	(805) 546-8231	George Batiuk, Jr.	Custom aluminum model traveling cases.
	Bear Model Products	17400 S. Harlem Ave.	Tinley Park, IL 60477	(312) 532-7349	Bob Bearden	Balsa and plywood.
	Blue Ridge Models	Box 429	Skyland, NC 28776		Phil Hartman	Rubber kits, CdH, P-30, Sport.
	Bradley Model Prods.	1337 Pine Sap Ct.	Orlando, FL 32817		Jim Bradley	Car-Graphite matl and components; FIA timer.
	Campbell's Custom Kits	PO Box 5996	Lake Worth, FL 33461	(305) 968-1045	Lee Campbell	FF Kits, hdwr, supplies.
	Champion Model Products	880 Carmen Ct.	La Verne, CA 91750	(714) 599-3348	Geo. Schroedter	Kits, rubber, matls.
	Chandler Engineering Co.	7858 Ferralone Ave.	Canoga Park, CA 91304	(213) 340-7695	Bruce Chandler	OT Engines, conversions.
	Motori Cipolla Combat/FF	PO Box 111	Jasonville, IN 47438		Doc Passen	Cipolla Engines.
	Clemcraft	1201 E 10th, PO Box 524	Sand Springs, OK 74063	(918) 245-3649	Jim Clem	FF Gas kits.
	Eric Clutton	913 Cedar Lane	Tullahoma, TN		Eric Clutton	Import diesels.
	C&M	12324 Percival Street	Chester, VA 23831		Nat Comfort	Custom multifunctn timer K Mart-based
	Country Club Aero Supply	3412 Norton	Independence, MO 64052	(816) 252-6734	Jim Root	Balsa & celluloid OT wheels, Jimmy Allen Bluebird plans.
	Custom Engines & Access.	6032 42nd Avenue	No. Minneapolis, MN 55422	(612) 533-7954	Jim Sinton	Engine work, chroming, etc.
	Denton Motors, Etc.	1107 SW 42	Oklahoma City, OK 73109		Stan Denton	CO2 motor, rubber stripper.
	Vic Didelot	4410 Lorna Lane	Erie, PA 16506		Vic Didelot	O&R spare parts, ignition timers, tanks, etc.
	Dub's Custom Works	3800 Shellbrook Avenue	Fort Worth, TX 76109	(817) 924-4005	Dub McCormick	Gas engine mts & frt end fittings.
	Kevork K. Fags	236 Thayer St.	River-Vale, NJ 07675		Kevork Fags	Taibi type TD tank & radial mts; spring winders.
X	FAI Model Supply	PO Box 3957	Torrance, CA 90510		Ed Dolby	Rubber(!), FF supplies, kits, etc.
	Five Corners Sports Shop	9210 Darley Drive	Louisville, KY 40222		Burr Stanton	Foam kits; Bost., Scale, P30, PeeWee 30, CO2.
	Flo-Cote	2913 Edwards	Bakersfield, CA 93306		Bob Ellington	Nitrate dope.
	Flyline Models, Inc.	PO Box 2136	Fairfax, VA 22031		Herb Clukey	Scale kits.
	Lawrence Freeborn	3416 Ethelwood Dr.	Jeffersontown, KY 40299		Lawrnc. Freeborn	Specialty modeling pins.
	Fresno Model Airplane Co.	4267 N. Charles	Fresno, CA 93722	(209) 226-3340	Marion Crowder	OT Sport Rubber Kits.
	Getting Technologies, Inc.	One Streamside Pl. East	Spring Mills, PA 16875-0085		Martin Getlig	OT Ign. Components.
	Golden Age Reproductions	PO Box 13	Braintree, MA 02184		Joe Fitzgibbons	Scale plans, kits.
XX	Hannan's Runway	Box A	Escondido, CA 92025		Bill & Joan Hannan	Indoor scale books, kits, plans, etc.
X	Ray Harlan	15 Happy Harlan Road	Wayland, MA 01778		Ray Harlan	Balsa stripr, rubber strpr, beam scale, etc.
	Bob Hatschek	316 Grosvenor Street	Douglaston, NY 11363		Bob Hatschek	Circle tow hook for FIA, FIH.
	Hobby Hideaway	RR 2 Box 19	Delavan, IL 61734	(309) 244-7389		FF, Scale, plans, kits, diesels, electrs, parts.
	Hobby Horn	PO Box 2212	Westminster, CA 92683	(714) 893-8311		FF, OT, IN, rub, gas, elec; kits, plans, matls.
	Allen Hunt	Box 726	Dunbar, WV 25064		Allen Hunt	OT scale plans.
XX	Indoor Model Supply	Box 5311	Salem, OR 97304		Lew Gitlow	Indoor kits, matls, tools, etc.
	Jack's Models	4036 W. 173rd Pl.	Torrance, CA			Satellite kits and gas hdwr.
	Jean Laboratory	PO Box 385	Jean, NV 89019-0385		Joe Kaye	Cyl. plating, hon'g; refit'g cranks, pistons.
	Larry Jenno	2020-3 Lomita Blvd.	Lomita, CA 90717		Larry Jenno	Torp. 29 & 32 repros.
X	Jim Jones	36631 Ledgestone	Mt. Clemens, MI 48043	(313) 791-0651	Jim Jones	Indoor tools, GSE
	K&W Enterprises, Inc.	7824 Lexington Avenue	Philadelphia, PA 19152	(215) 331-4890	Tom Kerr	FF gas folding props, brakes.
	Kustom Kraftsmanship	PO Box 2699	Laguna Hills, CA 92654	(714) 830-5162	Joe Klause	Engine pts and svcs; OT supplies.

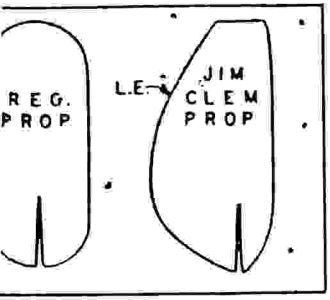
WE THANK SAN DIEGO'S SCALE STAFFEL FOR THIS LIST OF FF SUPPLIERS. TOM ARNOLD, WALT MOONEY.





FROM:

INMARC NEWSLETTER
9210 DARLEY DR.
LOUISVILLE, KY 40241



TIP WASH-OUT 1/16IN.



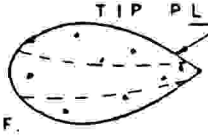
ASSEMBLED RUDDER POSITION

ALL JOINING DONE WITH 50/50 WHITE GLUE, 5 MIN EPOXY, OR C/A WITH FOAM BONDER

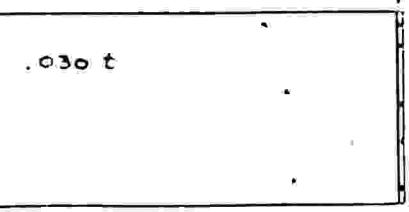
ER



TIP PLATE



ISK REINF.



OR GUPPY

.. LOUISVILLE, KY 40222

Cut the fuselage parts as thin as you can--.020 thick if your equipment permits. Flimsy as it seems when handling it, when totally glued into the fuselage box, the compression strength is far in excess of what is required. But be sure all the seams--both box corners and sides-to-formers--are continuously glued. Any white glue thinned 50/50 with water does fine (but don't leave Elmer's glued joints out in the rain).

We've been cementing the LG wire to the fuselage with cy/a but be SURE you pre-treat the area with the accelerator or that section of the fuselage will simply disappear!

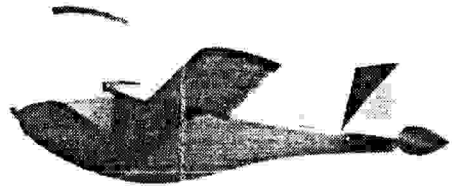
Coloring is from felt-tipped markers, but try them on foam scrap first--some of them will also dissolve styrofoam with surprising speed.

Final weight should run in the 2-3 gram range, less motor of course. Power is a two-strand loop of 1/32 rubber 2-3X distance between motor hooks.

The cabin window structure shown is optional and somewhat aggravating to build--on the Pistachio model, we just delineate the windows and windscreen with the color trim--still meets all contest requirements.

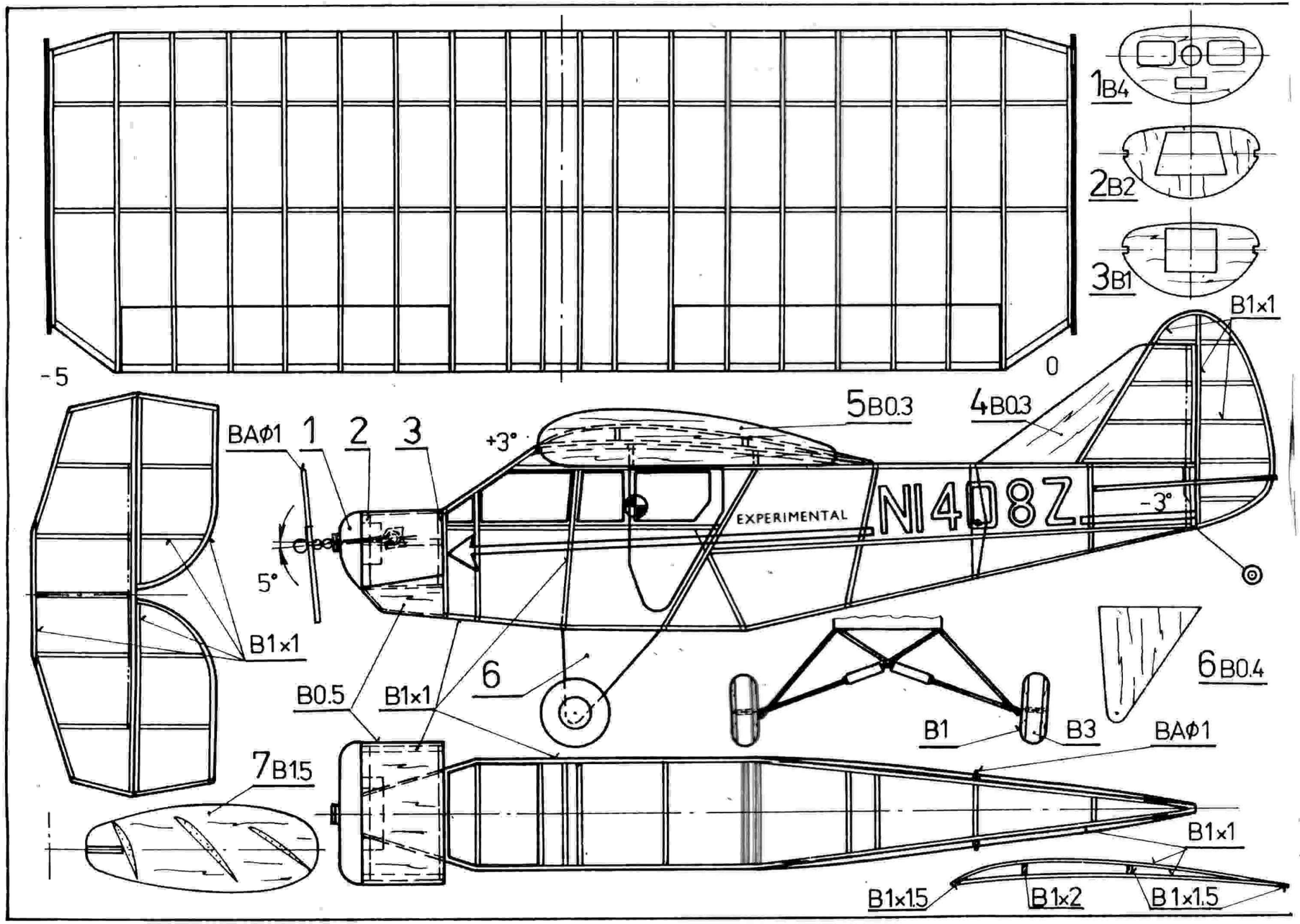
Oh yes, the styrofoam we're talking about is the beaded type that shock-pads almost all purchased items nowadays. The fast-food and supermarket trays are a different breed--heavier (denser) and among other things, have a "skin" that must be sanded off before they will accept gluing. They are usable when cut thin, but still heavier than what comes packed around your new TV. Try your local appliance dealer--the packing stuff is really a pain-in-the-XXXX (neck) to him and he'll be glad to give you enough to build 4,089,618 of these tiny jobs!

Photos show the model-of-a-model winning its class at the big Johnson City, TN bash last year. It is a c inch flyer for our low-ceiling sites--try one. Picture on the right is Gordon Trabue & Demoiselle.



GUPPY MODEL OF MODEL
FROM BURR STANTON





Adresa redakce: 113 66 Praha 1, Jungmannova 24, tel. 26 06 51, linky 468, 465. Vychází měsíčně. Cena výtisku 5 Kčs, pololetní předplatné 30 Kčs. – Rozšiřuje PNS. Informace o předplatném podá a objednávky přijímá každá administrace PNS, pošta, doručovatel a předplatitelská střediska. Objednávky do zahraničí vyřizuje PNS – ústřední expedice a dovoz tisku Praha, administrace vývozu tisku, Kovpakova 26, 160 00 Praha 6. Návštěvní dny: středa 7.00 až 15.00 h., pátek 7.00 až 13.00 hodin. – Inzerci přijímá inzertní oddělení Vydavatelství NAŠE VOJSKO. Tiskne Naše vojsko, s. p., závod 8, 162 00 Praha 6-Liboc, Vlastina 710. Nevyžádané příspěvky se nevracejí.

Toto číslo vyšlo v lednu 1990.

Index 46882

© Vydavatelství NAŠE VOJSKO Praha

modelář

LEDEN XLI
Vychází měsíčně

1/90

měsíčník pro letecké, raketové, automobilové, lodní a železniční modelářství, nositel významných tradic v branné výchově II. stupně.

Vydává ÚV Svazarmu ve s. p. Vydavatelství NAŠE VOJSKO, 113 66 Praha 1, Vladislavova 26, tel. 26 15 51–8. Vedoucí redaktor Vladimír HADAČ, redaktoři Martin SALAJKA, Tomáš SLÁDEK, sekretářka redakce Jitka MAĎAROVÁ. Grafická úprava Jan ČERNÝ.

WE DROP THE OTHER SHOE - AS A COMPANION PIECE TO LAST MONTH'S LACEY FROM JAPAN, WE PRESENT THE FIKE FROM MODELÁŘ - CZECH.

PISTACHIOS FOREVER

BILL HANNAN HAS THE PERFECT RUBBER POWER (1/32" SQ.) FOR THIS, AND FOR THE LACEY —— AND THE GUPPY

FIKE E
PISTACHIO

The PISTACHIO GUPPY . . . A Model of a Model

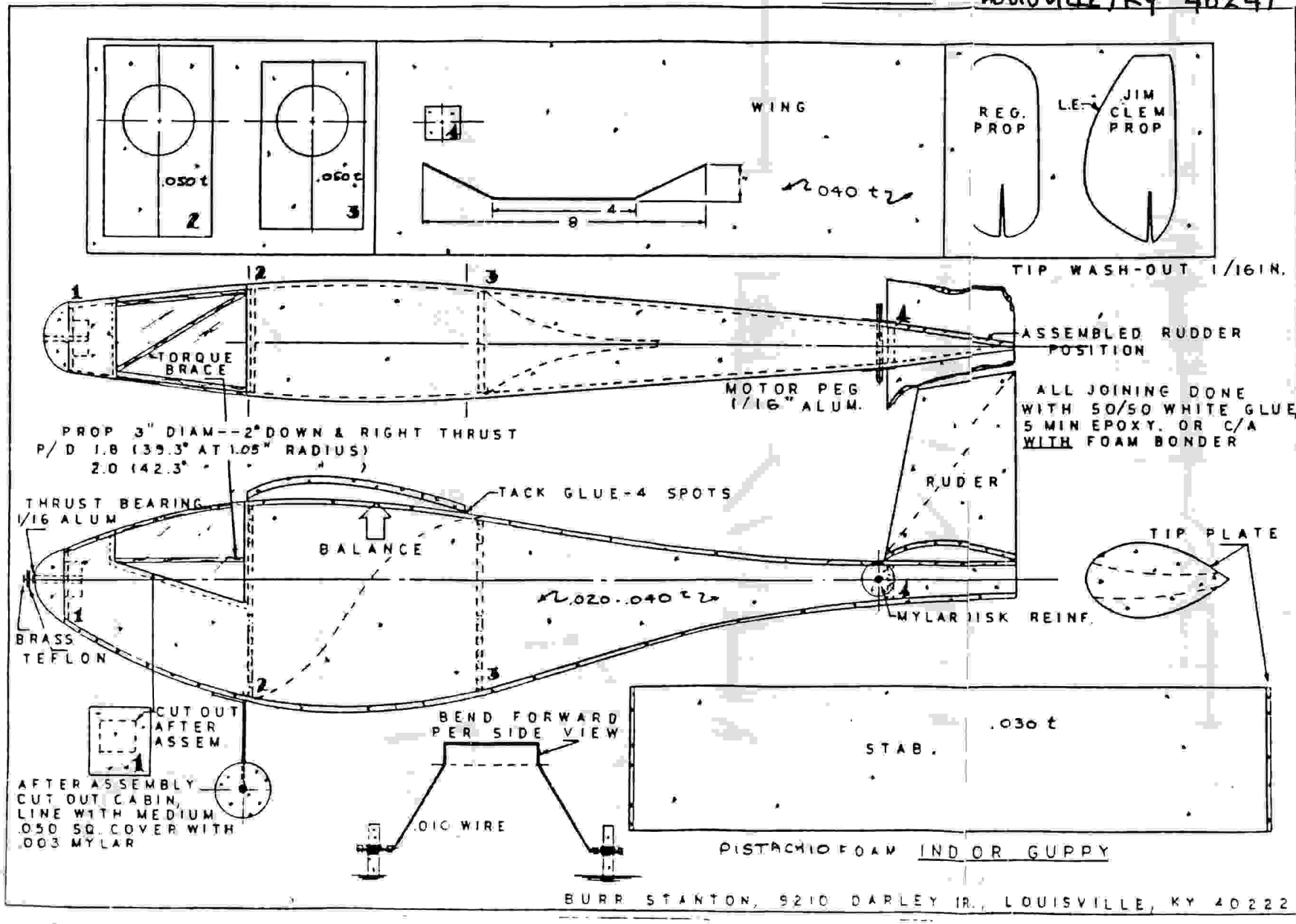
This tiny flyer is guaranteed to surprise you on two counts: first, it is a superb flying machine, mimicking its big brother in a smooth, circling climb and let-down; two, these tiny foam jobs are well-nigh indestructible. Banged up as they may get, a short session with 50/50 diluted white glue brings them back perky as ever.

The preferred approach is to hot-wire all parts from as light a beaded styrofoam as you can find. The best we've ever had ran about .6 lbs/cu ft and came protecting a shipment of very delicate instruments from overseas. Lumberyard insulating foam runs about 1.5 lbs/cu ft, usable but a little heavy.



FROM:

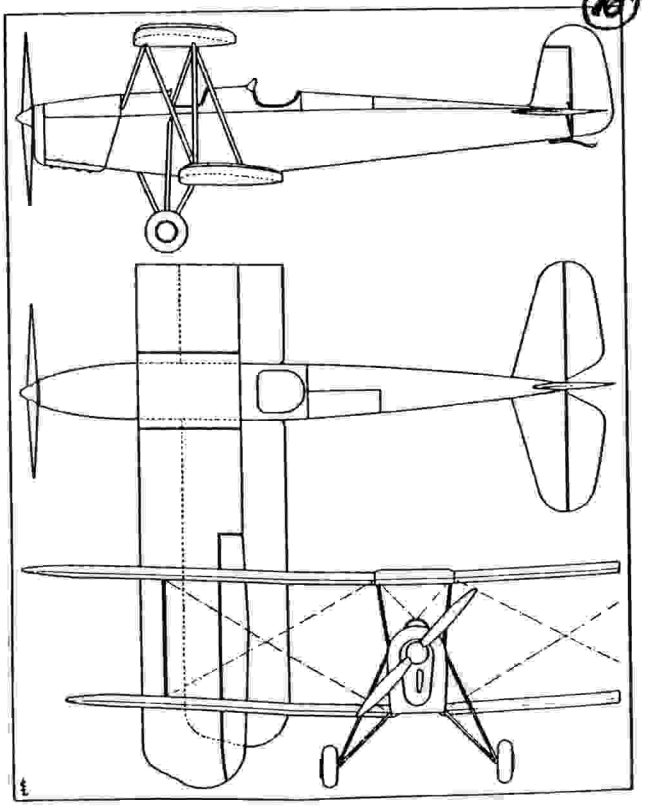
INMARC NEWSLETTER
9210 DARLEY DR.
LOUISVILLE, KY 40241



BURR STANTON, 9210 DARLEY DR., LOUISVILLE, KY 40222

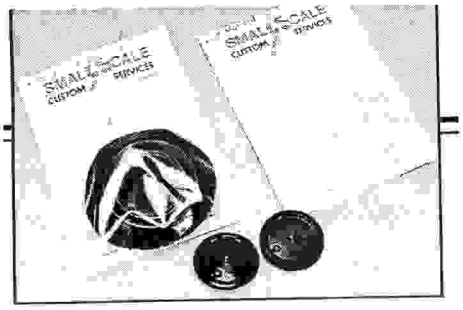
SUPPLIES
LINE OF GOODS - INDOOR

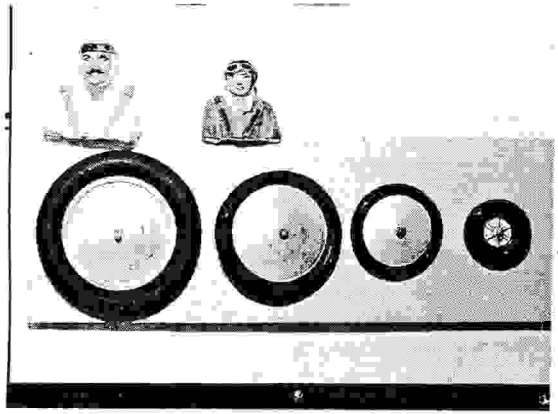
t — Ign. engines, parts, supplies.
Book: "Making Scale Model Airplanes Fly," Peanut plans.
Replica Orwick 64, 73; Elfin 2.5
, Jr. — Custom aluminum model traveling cases.
Balsa and plywood.
Rubber kits, CdH, P-30, Sport.
Car-Graphite matl and components; FIA timer.
FF Kits, hdwr, supplies.
lter — Kits, rubber, matls.
er — OT Engines, conversions.
Cipolla Engines.
FF Gas kits.
Import diesels.
Custom multifunctn timer K Mart-based
Balsa & celluloid OT wheels, Jimmy Allen Bluebird plans.
Engine work, chroming, etc.
CO2 motor, rubber stripper.
O&R spare parts, ignition timers, tanks, etc.
ck — Gas engine mts & frt end fittings.
Taibi type TD tank & radial mts; spring winders.
Rubber(!), FF supplies, kits, etc.
Foam kits; Bost., Scale, P30, PeeWee 30, CO2.
Nitrate dope.
Scale kits.
om — Specialty modeling pins.
er — OT Sport Rubber Kits.
OT Ign. Components.
s — Scale plans, kits.
nnan — Indoor scale books, kits, plans, etc.
Balsa stripr, rubber strpr, beam scale, etc.
Circle tow hook for FIA, FIH.
FF, Scale, plans, kits, diesels, electrs, parts.
FF, OT, IN, rub, gas, elec; kits, plans, matls.
OT scale plans.
Indoor kits, matls, tools, etc.
Satellite kits and gas hdwr.
Cyl. plating, hon'g; refit'g cranks, pistons.
Torp. 29 & 32 repros.
Indoor tools, GSE
FF gas folding props, brakes.
Engine pts and svcs; OT supplies.

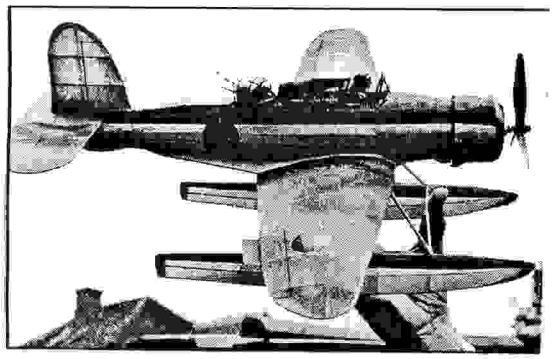


Not a Moth - but it would fly just as well! The Weiss WM 10, a Hungarian design from 1931, spanned 29ft, was 22ft long, and was fitted with a 120hp in-line four of the company's own manufacture.









Top left: Here's what to look for – these Small Scale Custom Services packs contain wheels and a transparent pilot! A more-easily distinguishable selection appears at top right. In all, four pilots and four types of wheel, plus dummy Wasps in 'CO$_2$' and 'Peanut' sizes are on offer. Above: Look out for Lindsey's latest – this Blackburn Roc is fitted (naturally) with one of his radials...

	Chet Lanzo	1485 Lesler Road
	Bob Larsh	45 S. Whitcomb Ave.
	Al Lidberg	614 E. Fordham
	Ernie Linn	3505 E. Mt. Vernon
	Dick Lyons	552 Camino Concordia
	M&G Engines	PO Box 6026
X	Mace Model Aircraft Co.	359 S. 119th East Ave.
	J. H. Maxwell	14 Upper Craigs
	Micro Model Eng'g.	1301 W. Lafayette
XX	Micro-X	Box 1063
	Midway Model Co.	PO Box #9
	The Model Box	12 Cook St.
	Model Covering Co.	2320 Ocean Parkway
	Model Engine Specialties	34W883 S. James
	The Model Museum	3724 John L. Ave.
	Walt Mooney	PO Box 231192
	Gil Morris	2810 Brackley Rd.
	T. F. Morrison	PO Box 10658
XX	MRL Model Research Labs	25108 Marguerite Pkwy B-160
	Mike Myers	911 Kilmary Lane
	Tony & Addie Hobby Lobby	3512 W. Victory Blvd.
	The Netcraft Co.	2800 Tremainsville Rd.
	NFFS Plans	10115 Newbold Dr.
	Oldtimer Model Supply	PO Box 7334
	Oliver Model Products	2213 El Cejo Circle
	Jim O'Reilly	4760 N. Baltin
	Peck-Polymers	PO Box 2498
	Pharis Models	PO Box 804
	John Pond OT Plan Svc.	PO Box 90310
	Puti's Hangar Products	5695 Marshall Rd.
	Premier Co.	PO Box 8264
	RGOA Poles	936 Hamal Dr.
	Scale FLight Model Co.	630 Fairway Lane
	Schlueter Free Flight Co.	3508 Poinsettia Ave.
	Schmidt Custom Kits	11948 Franklin Blvd.
	Seaglen Model Co.	Box 123
	Simplex Miniature Engines	143 Richmond St.
	Small Parts, Inc.	PO Box 381736
	Karl Spielmaker	4690 Burlingame SW
	Stanlon Hobby Shop, Inc.	4734 N. Milwaukee
	Starline Int'l.	6146 E. Cactus Wren Rd.
	Streigler's R/C Supply	5831 McKnight
	T&O Research Assoc.	6371 El Cajon Blvd., Ste. 115
	Jim Walston Retrieval Sys.	725 Cooper Lake Rd., SE
X	Wilder's Model Machine Wks	2010 Boston
	Frank Zain	Box 135

X England - Small Scale Custom Services
ENGLAND - K+P ENGINEERING LTD.
CASTLE ROAD, ROWLANDS CASTLE, HANT

BUSH AVENGER UPDATE - WE REVIVE THE FUDGE FACTOR -

Wow! We have sent over sixty (60) Bush Avenger plans so I guess at least a dozen will get built. Since there will be so many sending in postal times we remind you to include the ceiling height of your site so we can adjust your time fairly. This old Bud Tenny article explains the process. The documentation sent on the plan is still about as accurate as we have gotten. Bill Northrop has asked for an article on this event...SO...see YOUR name in MODEL BUILDER. Still time to build YOUR Avenger..be the last in your neighborhood to build one. Send $2.95 to MIAMA . Come to Johnson City, or send in your time & ceiling height.

Whatever became of Postal contests? Several years ago it was fairly common for Indoor fliers in one area to challenge fliers in other areas to Postal contests. The challenge usually specified a time frame and the events to be flown; each club would use its own site.

What about different ceiling heights? Sometimes that didn't matter, but someone in NIMAS (The National Indoor Model Airplane Society), probably Charlie Sotich, came up with a set of "fudge factors" which helped take into account different ceiling heights. The basic premise of the fudge factors is that the average duration of Hand-Launched Gliders (HLGs) varies as the ratio of ceiling heights, and that Indoor Endurance model times vary as the square root of the ceiling-height ratio.

How's that, again? Suppose one club had a 25-ft. site (AMA measure), and the other had a 32-ft. site. The guys flying in the 25-ft. site would multiply their HLG times by 32/25 (or 1.28). On the Rubber times, the multiplier is the square root of 1.28 (or 1.13). One catch to this ceiling height adjustment is that the HLG factors work best with no greater variation in ceiling height than 1.4:1. Fudge factors also haven't been tried for ceiling heights much beyond 35 ft., but there have been good results for the fudge factors used by NIMAS.

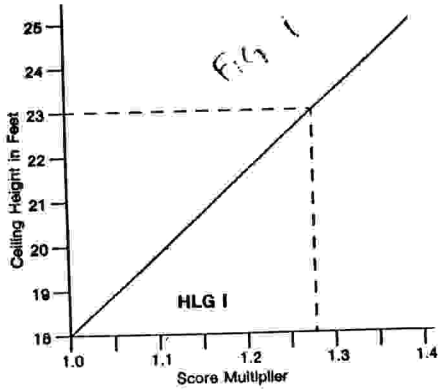
Three tables below show the NIMAS fudge factors, and Figures 1, 2, and 3 present the same data graphically. In Figure 1, dashed lines show that the HLG fudge factor for 23 ft. against 18 ft. is 1.28.

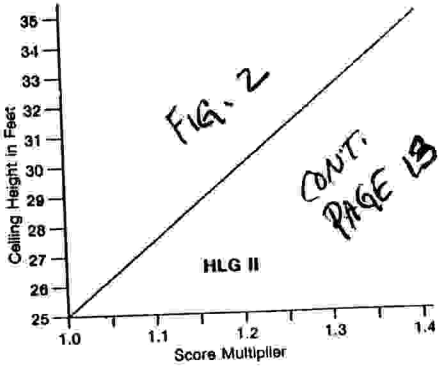
Table 1—HLG: 18 ft.—1.39; 19 ft.—1.33; 20 ft.—1.28; 21 ft.—1.22; 22 ft.—1.16; 23 ft.—1.11; 24 ft.—1.05; 25 ft.—1.0.

Table 2—HLG: 25 ft.—1.4; 26 ft.—1.36; 27ft.—1.32; 28 ft.—1.28; 29 ft.—1.24; 30 ft.—1.2; 31 ft.—1.16; 32 ft.—1.12; 33 ft.—1.08; 34 ft.—1.04; 35 ft.—1.0.

Table 3—Rubber Power: 18 ft.—1.394; 19 ft.—1.374; 20 ft.—1.354; 21 ft.—1.333; 22 ft.—1.312; 23 ft.—1.291; 24 ft.—1.269; 25 ft.—1.247; 26 ft.—1.225; 27 ft.—1.202; 28 ft.—1.178; 29 ft.—1.155; 30 ft.—1.130; 31 ft.—1.105; 32 ft.—1.08; 33 ft.—1.054; 34 ft.—1.027; 35 ft.—1.0.

So why don't you try Postal meets? If you do, share the results with us via this column!





CONT. PAGE 13

FINAL MEET (#6) OF THE 89/90 MIAMA INDOOR SEASON....

MAY 19-20

MAC DILL AFB

HANGAR 5

(CALL TO CONFIRM 305-858-6363)

WW II MASS LAUNCH

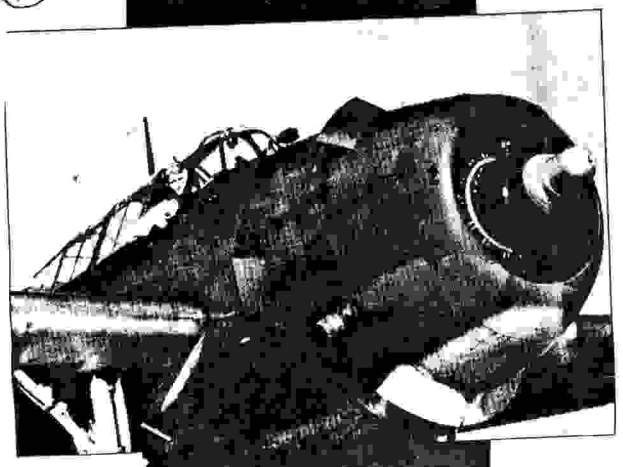
NEXT MEET APRIL 22

M/D SOUTH COLLEGE

INTER-GNATS & FLY-IN

CALL - APRIL 20

. Bush's torpedo bomber was named "Barbara." His



was the number "two" plane in the squadron. His other three aircraft were named after his fiancée too.

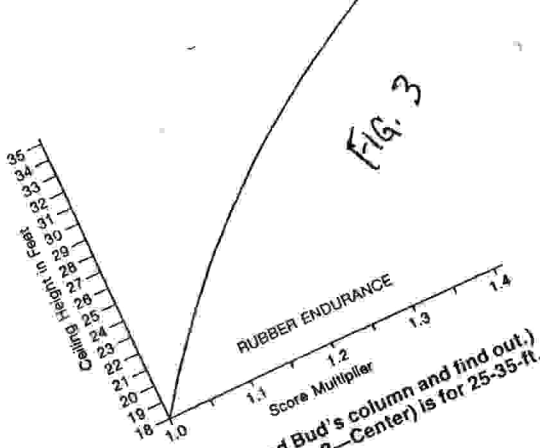


FIG. 3

Here they are, folks: Fudge Factors which can be used if you hold a Postal contest. (What's a Postal contest? Read Bud's column and find out.) "HLG I" (Figure 1—L) is for Hand-Launched Gliders flying under ceilings in the range 18-25 ft. high. "HLG II" (Figure 2—Center) is for 25-35-ft. ceilings. "Rubber Endurance" (Figure 3—R) is for Rubber power under ceilings in the 18-35-ft. height range.

NO MORE BAGS OF PEANUTS + PISTACHIOS:

Tributes to WALT MOONEY continue to arrive at MIAMA Hq. Newsletters and magazines from all over the world morn the Peanut Perfessor's death. Shonoi Peanut Power dedicated Issue #43 to Walt with articles, plans, and photos of his visit to Japan. To me, the most powerful and eloquent tribute was this little drawing, from Shonoi, expressing the universal sadness that transends all lanquages: So long, Walt.



MIAMA also regrets to report the death of good member Ed Shaw of Hollywood, Fla. in March, 1990.

FROM THE HORSES MOUTH
AND OTHER ORIFICES.



Lead Story

• In July University of Miami microbiologist Patricia Mertz sought volunteers with smelly feet so she could test her hypothesis that the odor was similar to that of Limburger cheese. Her researchers planned to sniff lots of cheese to familiarize themselves with the scent, then study five volunteers a day for 48 days, at a distance of two inches.

Government in Action

• The U.S. Department of Energy last year spent $1.4 million sending the entire 25-pound, 8800-page environmental impact statement on the superconducting supercollider to 16,000 citizens who had expressed interest in the project, when only a summary of the statement was required by law.

• Former Los Angeles County Deputy Sheriff Deron Michael McBee filed for disability benefits in 1986, claiming that he hurt his back in a scuffle with a prisoner. He was charged recently with filing a false claim after being spotted performing as a male stripper in Atlantic City, where his act included gyrating wildly (wearing only a G-string) and leaping into the audience to hoist a woman on his shoulders. He claims he has the type of injury that is not affected by dancing.

The Only Way Out

• In January Belinda Sue Burns committed suicide in Houston minutes after having been involved in a minor traffic accident. A 22-year-old Pontiac, Michigan, woman was rescued in January after she slashed her wrists immediately after a minor traffic accident. In June, Rosa Maria Hidalgo shot herself to death in Miami as she was being pursued by police for speeding.

• Two high school students in Seoul broke their backs and legs in June as they jumped from a building because one of their teachers had been fired for attempting to organize a union.

• In July the government of Singapore began imposing fines of up to $77 for those who fail to flush public toilets after using them. (Because of public urination on Singapore elevators, special sensors have been installed on them that will stop the elevator, activate a video camera in the ceiling, and summon police.)

• Professor Richard Jaeckle, 35, described as a "brilliant" Ohio State University researcher on psychiatric depression, killed himself in August.

MIAMA GRAND PRIX:

A Johnson city MIAMA GRAND PRIX update. AMA has provided trophies for the FEDERATION ROG TEAM EVENT. The two man team from each state concept originated by Tony Becker will be continued again.

Tony Sutter is creating the trophies for this year's new event.. COCONUT SCALE. We are a little concerned that not enough publicity has been given to this event. You score your best flight of 4 officials, ROG. We also plan to have a mass launch for these magnificent flyers.

1. Recognizable aircraft of 36" span,monoplane,or 30" (Min.) bipe.
2. Ranking points for scale from 10' away. Single surface OK.
3. Winner has low total of flight AND scale points..ties broken by best static score.
4. Min. weight...1 Oz. less rubber. Rubber power required.

PISTACHIO is the other MIAMA event (Besides the Bush Avenger). Model of a model (Pistachio size model of any outdoor "Fuselage" model) and RIDOTTO (Smallest plane that will fly 30 sec.) are in addition to the regular Pistachio models. GET BUILDING,PILOTS and get there early to participate in the WORLD F1D Champs.

WHAT'S ON IN FREE FLIGHT?

April 21/22-Malabar,Fl SAM Spring Old Time Meet CD Les Alonzo 813-229-1083
APRIL 22 MIAMI DADE SOUTH COLLEGE: 9 t0 5 Fly- In and WORLD PISTACHIO INTER_GNATS
CALL Fri. April 20 to confirm. Get YOUR Pistachio Models ready.
May 12/13..Wrong date for MIAMA final meet that keeps appearing in FMA Newsletter.
MAY 19/20 Correct date (So far) for MIAMA FINAL MEET..MacDill AFB CD Dave Linstrum
May 6.Melbourne,Fl Fla. State Record Trials.
JUNE 4,5,& 6..Johnson City. WORLD F1D Champs followed JUNE 7,8,& 9 U.S. Nats. See P. 11
This is an outstanding week of indoor flying and should not be missed. The world's best !
JULY 15-22 LAWRENCEVILLE.IL AMA NATS FOR C/L, R/C, and FF scale (Including many FAC events)
AUG 4. (TENTATIVE) ISLAMORADA, KEYS - WELLS' ANNUAL ROW BASH.

JUNE 16 - PALM BAY, FL. SILENT KNIGHTS OUTDOOR FF - GLIDER + RUBBER POWER
CD LEE CAMPBELL 407-686-7824
JULY 7,8 - PALM BAY - FLORIDA STATE FF CHAMPS - DAN McCALL CD, 813-763-7020

THE HANGAR PILOT

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