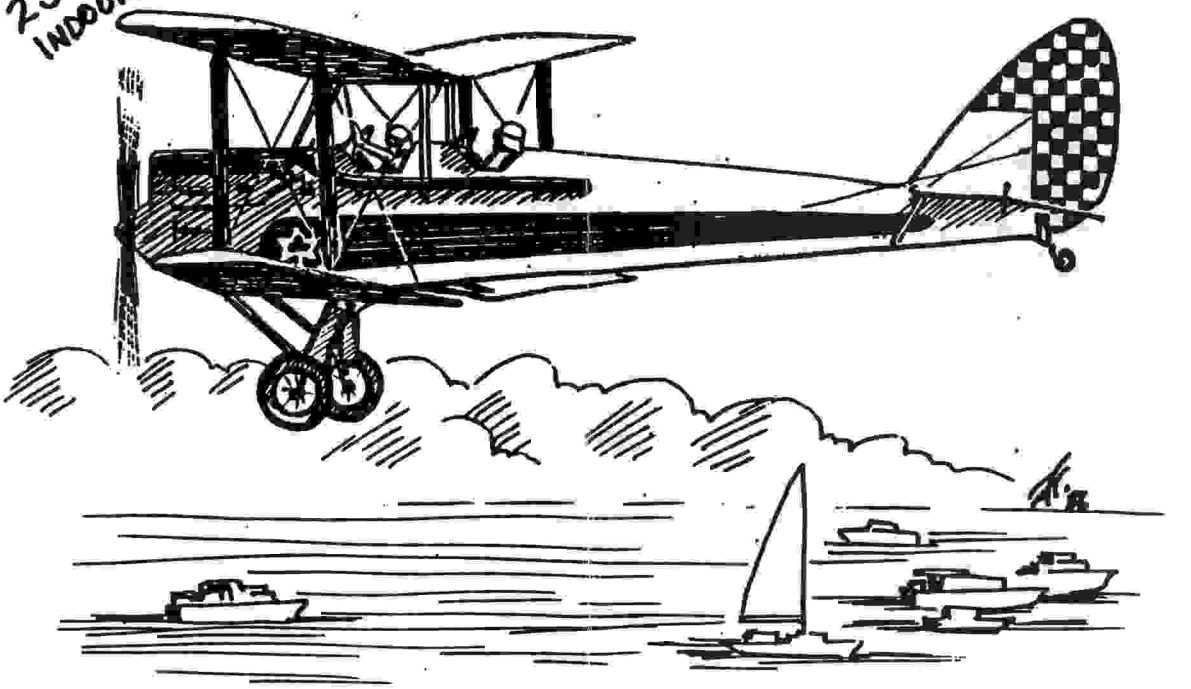
THE HANGAR PILOT

MIAMI INDOOR AIRCRAFT MODEL ASSOCIATION — MIAMA

23RD YEAR of PUBLICATION
INDOOR ISN'T FOR EVERYONE

ISSUE 163

- RESULTS, MIAMA MEET 5
- BIG MINI-STICK ISSUE
- MODEL BOXES
- EZB TRIM



NEXT MEET: APRIL 16,17 MAC DILL AFB

TAMPA 9-5 MIAMA MEET #6

OUTDOOR OLD TIME FREE FLIGHT + FLYING ACES

PALM DAY APR. 23,24



"LIKE A LETTER FROM HOME" Whelan

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, I-views, complaints, gripes and compliments to: Dr.John Martin Jr., President / Editor, 3180 Tigertail Ave., Miami, FL 33133 USA. phone: 305-858-6363.

MIAMA..AMA CLUB 986;FAC Sqdn,#11

MO-1 MADDNESS - MIAMA MEET 5 C/D DocMartin

Another great turn out (18) of indoor skysters. Eldon Williams was back again with the hard to trim Miles M-18 showing promise. Charlie Johnson continues to improve in Penny and Mini-Stick. Jake Larson, as usual, had some new and obscure scale models. Jake, an old Navy man, has floats on at least one half his craft. Speaking of obscure, John Voorhees had a NO-Cal 1907 DePischoff I. It looks like a big box kite and has considerable drag. Just when Wayne Trivin thought his state Bostonian record was safe, along comes John Barker and breaks it at 534.2 including a four minute flight. If you weren't already bored by Doc's peanut and pistachio Goldwing, he shows up with a Coconut Goldwing and wins the event. Don Brimmer got some great times from his fine looking pistachio Citabria for his first win, and his Hi Ho model of a model nosed out Linstrum's Pussy Cat .

On Sunday we found President Clinton's aircraft occupying 1/3 of hangar 3 but we carried on. Sidney Gilbert's embryo Hornet pipped (I got that one in Biggleswade) Linstrums' XY Chromosome by 4 points, (For a FAC Kanone), and Sid's tried and true Lacey retired with its' second win in peanut. Dick Hardcastle made his annual pilgrimage to MIAMA as he has been doing for over 20 years. Carl Hedley motored up from Miami in style in his new Mercedes Diesel.. Joe Nuszer was depressed at the prospect of the President's plane, and went home. You should see Joe's No-Cal Hosler Fury! Looks like a winner.

THE BIG STORY OF THE WEEK END WAS ED SEAY'S MARTIN MO-1 CONTEST.

Model Aircraft Labs owner- Ed Seay and his fellow Texan Dale Hogue brought Ed's mobile model shop to hangar 3 to kick off his new line of peanut models and toofficiate the Martin/Linstrum Martin MO-1 Contest. Ed introduced his new line of sure-fire flyeer peanuts with an introductory one dollar MO-1. Who could resist? Over 170 tissue trimmers took advantage of this offer and got this fine flyer. Eight live bodies entered the fly off in hangar 3 including 2 float MO-1's. In the final fly off Ric Choate's MO-1 survived a rocky launch to win his first Kanone by 4 seconds over Sidney Gilbert, andby 7 sec. over Don Brimmers float plane. All got merchandise certificates from MAL. Ed Seay's generosity and interest has spawned a new line of seven peanuts- all good flyers Beside the MO-1 there's the Ford 2-AT, Farman F-190, Dornier Komet (All roaring 20's airliners),Denny Kitfox, and Pilatus Porter (Modern age), and the 1920's Jenny monoplane. They are available from . MAL, 108 S. Lee St. Irving, TX 75060 for $9.95 post paid. Ed will add more models and have more meets for them in the future. He will be at Johnson City with his excellent wood and supplies. IF ENOUGH OF YOU PILOTS SHOW UP WITH A MAL PEANUT WE WILL ORGANIZE A MIAMA GRAND PRIX EVENT FOR YOU. I'll be there with my MO-1 float plane. I blew its motor in the fly off.

MEET 5 MAC DILL HANGAR 3 MARCH 19,20 1994

(2)

AMA PEANUT SCALE:

1. Sidney Gilbert	Lacey M-10	86	2:04	1:55 (Max)	172	2 WINS
2. Doc Martin	Goldwing	82	1:21	1:20	162.5	
3.Don Brimmer	Martin MO-1 on floats	92.1	1:00	1:00	152.1	
X Sidney Gilbert	Martin MO-1	80.6	1:06	1:15	151.1	
4. Millard Wells	Martin MO-1	81	1:12	1:04	149	
5. Ric Choate	Martin MO-1	83.6	1:07	:59.5	147.1	
X. Millard Wells	Huntington H-12	72.1	1:17	1:08	140.5	
X.Don Brimmer	Lemberger	86.8	:56	:47	138.8	
6.Walt Schlesinger	Cougar	80	:34	:28	121	
7.Bill Criss	Fike	70	:45	:55	120	
8. Jake Larson	Curtiss SOC-3	97	:11	:20.5	113	

FLYING ACES SCALE:

1.Doc Martin	Howard Ike	67	58	125
X Doc Martin	MO-1 /Floats	71	54	125
2.Jake Larson	Albatross/Floats	79	28.5	107.5
3.Ric Choate	B.A.Swallow	64	35	99
4.Don Brimmer	Lep.Moth	57	36	93

FLYING ACES NO-CAL

1.Dick Obarski	Lacey	4:19
2.John Voorhees	Farman	3:52
3.Sidney Gilbert	Finnair	3:34
4.Tom McCoy	Fike	3:09
5.Carl Hedley	Zero	1:59
6.Don Brimmer	Zero	:57

FLYING ACES EMBRYO ENDURANCE

1.Sidney Gilbert Hornet	326
2.Dave Linstrum XY Chromosome	322
2.Carl Hedley Hornet	287
4.Earl Thomas Hornet	222
5.Don Brimmer Pink Pup	179
6. Walt Schlesinger 12½ ¢	144
7.Millard Wells	119

MIAMA PISTACHIO SCALE

		static	Fly	Total
1.Don Brimmer	Citabria	1 1:02	2	3
2.Doc Martin	Goldwing	2 1:20	1	3
3.Ric Choate	Citabria	1 50	5	6
4.Millard Wells	Stahlwerke	3 53	4	7
X.Doc Martin	M 20b	4 54	3	7
5.Dave Linstrum	Dorn. Komet	2 44	6	8
X.Wells	Wee Ridotto	3 40	7	10

AMA EASY B

1.Dick Obarski	16:28
2.Dick Hardcastle	15:23
3.John Barker	13:17

PISTACHIO MODEL OF A MODEL

1.Don Brimmer Hi Ho	58
2.Dave Linstrum Pussy Cat	55

AMA PENNY PLANE

1.John Barker	9:32
2.Dick Obarski	8:05
3.Charlie Johnson	4:27
4.Dick Hardcastle	3:03

MIAMA DIME SCALE RETIRED WITH TWO WINS

L.Doc Martin	Comet Farman Stratoplane	61	60	67
2.Don Brimmer	Comet Great Lakes Bipe	40	39	44
3.Walt Schlesinger	Comet Puss Moth	25	25	16
4.Dave Linstrum	Megow Puss Moth	53	-	-

AMA UNLIMITED PENNY

1.John Voorhees	9:17

MIAMA COCONUT SCALE

L.Doc Martin	Goldwing 1:10
2. Dave Linstrum	Pilatus Porter 1:01
3.Walt Schlesinger	Hi Max :22

AMA BOSTONIAN (3:52 & 4:05)

1.1. JOHN BARKER	Scimitar III	1.12	534.2
4.Sidney Gilbert	7-Up	1.12	342.7
3.Don Brimmer	Pink Pup	1.12	224
4. Walt Schlesinger	Basic Bost.	1.10	147

★NEW STATE RECORD

MINI-STICK

1.John Barker	Tiddly Wink 2 7:32
2.Dick Hardcastle	7:08
3. Dave Linstrum	Biscayne Baby 5:23
4.Charlie Johnson	5:18
5Bill Criss	Biscayne Baby 4:37
6.Dick Obarski	4:12

MASS LAUNCH EVENTS

MIAMA PEANUT MASS LAUNCH... TEN ENTRANTS

1. Doc Martin	6.Walt Schlesinger
2.Sidney Gilbert	7.Dick Hardcastle
3.Millard Wells	88DonBBrimmer
4.Bill Criss	9. Jake Larson
5.Ric Choate	10. Dale Hogue

ED SEAY MARTIN MO-1 MASS LAUNCH

1.Ric Choate 1:07	5.Millard Wells
2.Sid Gilbert 1:03	6.Dick Hardcastle
3.Don Brimmer 1:00	7.Jake Larson
4.Doc Martin	8.Dale Hogue

FLYING ACES WORLD WAR II MASS LAUNCH (Kanone)

1. Millard Wells P-40	4.Don Brimmer Dauntless
2.Doc Martin Wildcat	5. Sid Gilbert Zero
3.Walt Schles. Dauntless	

COCONUT MASS LAUNCH

1.Dave Linstrum
2.Doc Martin
3. Walt Schlesinger

(3) BOXING BIRDS!!

Some ideas on boxes for indoor models: Dave "VTO" Linstrum

PEEKING INTO PANDORA'S INDOOR MODEL BOX

Indoor modelers all share a common problem:protecting their fragile craft- be they miniscule mini-sticks or huge Coconut Scale birds- from the ravages of the elements as they are transported to their vehicles and into the flying site. These models also need to be kept dust-free and out of the view of pets & children- cats are notorious model manglers. Fortunately, the problem is easily manageable.

The traditional solution is some kind of enclosed box- these can vary from a simple shoebox (I use a Reebok box) for a pair of Mini-Sticks to huge, custom built ply and plexiglas boxes for Microfilm F1D birds. Stan Chilton has one of these- and another shrunk down to fit under the seat on a Jumbo jet so he can hand-carry his Easy B birds! There are numerous "off the shelf" boxes (pun intended) available or you can custom build from easily crafted materials like 3/16" FomeCore or portions of appliance boxes. Scavenging a box and adapting it is often the easy way. Visit office supply stores, florists, electronics/appliance superstores. Often they stockpile boxes for customer use. Avoid supermarkets- the boxes have imploding lids and possibly roaches or ants!

INDOOR BIRD BOXES AND RESOURCES (FREE & CHEAP)

As mentioned, you can scout box sources: look for boxes with tight fitting lids (like the shoe box or copier paper box) instead of flaps. If you must use the latter, convert the double top flap to a single, edge hinged with overlay cardboard and interior stops to prevent implosion onto your fragile model. Sometimes small boxes can be joined to make adequate storage- we have one Coconut in a plant stand box (wings &tail) topped with a split-into-three sections FedEx box for the body and prop. If box is only slightly too small, add a "room addition"- some of our cigar box Pistachios exceed 8" span (6" oal) so we punch a hole in box end and add a protective extension for wingtip. Be creative and adapt! Here are some potential model-to-box matches:

- MINI-STICK: SHOEBOX,ENVELOPE BOX, DEEP CIGAR BOX
- PISTACHIO: CIGAR BOX (MODIFY), CUSTOM FOME CORE
- PEANUT: FED EX REPORT BOX, ELECTRONICS BOX, CUSTOM
- FAC/AMA: MICROWAVE BOX, OTHER ELECTRONIC, CUSTOM
- COCONUT: FLORIST BOX, UNDERBED STORAGE (MODIFY)

CUSTOM CRAFT A BOX TO FIT YOUR MODEL AND PARTS

When you want a custom fit or something special, use thin plywood or the easily cut FomeCore available in art supply & office supply stores. A metal yardstick and an X-Acto #11 are all you need to cut the box parts. Plan cuts to make most efficient use of material. Allow 3/16" for edge when fitting. Pin and glue with white glue-tape can be used to help clamp joints. Wood yardsticks cut to fit make good edge or top reinforcement. You can hinge the top with packing tape. Add interior partitions or blocking for model parts. We have found, however, that little damage if any comes from model parts jostling. Obviously, props & landing gear are too heavy not to be tied down or segregated.

IDENTIFICATION AND DECORATION: FINISHING BOXES

Unless you are a cabinetmaker, paint finishes are a waste of time. Contents identification, using large marker letters or other labeling, is essential. Model club decals, contests stickers and generic bumper stickers make easy decor. We like the dry humor stickers, such as: "Take my advice-I'm not using it".

13TH US INDOOR CHAMPS

(4) JUNE 2, 3, 4 EAST TENNESSEE STATE U.

DOME HOURS	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
THURSDAY JUNE 2 7:00 A.M. TO MIDNIGHT		H.L. GLIDER/ CAT. GLIDER					LIMITED P.P.						FID H.L. STICK CABIN ROG					11:00 LAST LAUNCH
FRIDAY JUNE 3 7:00 A.M. TO MIDNIGHT		AMA SCALE NO-CAL/KIT PLAN FAC SCALE PISTACHIO MINI-STICK PEANUT SPEED/UNLTD. SP.					MANHATTAN PENNY PLANE						FID H.L. STICK					
							MINI-STICK MASS LAUNCH 12:15											11:00 LAST LAUNCH
SATURDAY JUNE 4 7:00 A.M. TO MIDNIGHT		PEANUT SCALE BOSTONIAN COCONUT SCALE GRAND PRIX SCALE FAC HI-WING FAC GOLDEN AGE USIC FROG					INTERMEDIATE STICK EZB ORNITHOPTER											
							COCONUT SCALE MASS LAUNCH 12:15											10:30 LAST LAUNCH

* Information packs will be sent to past contestants around March 10th. The schedule has been revised to have 10 hours Microfilm, 10 hours Intermediate Stick and EZB (flyers to decide whether to fly together or split 5 hours each) and 10 hours Scale.

* Basic entry fee is $25 Open with Jr/Sr $1...includes 1 event. Additional events $6 each Open and Jr/Sr 50¢. Carter Hall dorms: Single or Double $25/night. Triple $37.50. No linen; bring your own.

* Bring your own tables/chairs or rent (1 table/2 chairs $2.50/day. Bring your own lamps, plugs & extension cords.

* ALL Open & Senior flyers will be required to time/assist.

* ALL 1994 AMA rules apply; "proposals" do NOT apply.

* During official events practice permitted in 2 basketball courts at north end. Absolutely NO flying in Mini-Dome prior to June 2.

* Flying schedule may be modified during contest. It will be your responsibility to keep a check on this.

* Astroturf may not be on floor...Dome is 116' high and 208' by 420'.

* Helium will be available...Bring your own balloons.

* AMA membership proof required.

* Entries must be postmarked by 5/9/94 or $10 late entry fee at site.

* Entry fees payable to USIC and sent to USIC, 30471 Manse, Harrison TWP, MI 48045.

*For entry blank, non-AMA rules and other info contact: Phil Klintworth, 936 Lakewood Rd., Fairfield Glade, TN 38555. Telephone 615-484-3192.

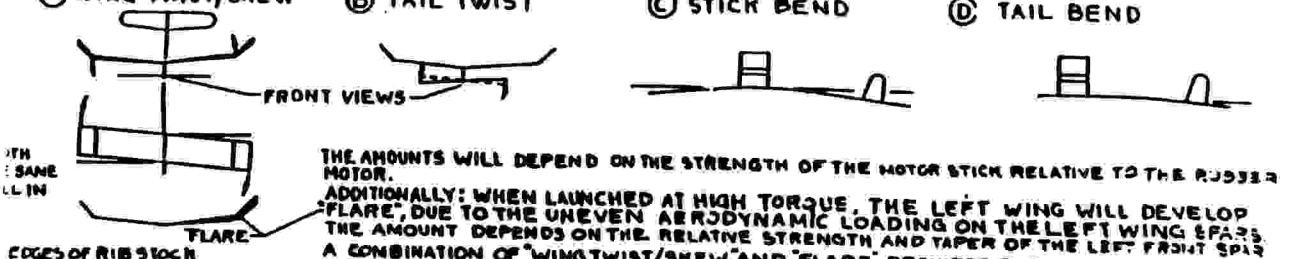
FROM BOING HAWKS, ED. GENE STUBBS 5505 ANN ARBOR NE
SEATTLE, WA. 98105

(5) Here's the best info I've seen on Indoor trimming tricks. It is copied from the 'Serendipity' Easy B plan by Jerry Nolin published in Model Aviation, January 1988. It shows how to utilize motor torque and tension to vary the trim by sanding different places on the motor stick.

LOW POWER TORQUE AND CIRCLE SIZE ARE CONTROLLED BY WING "OFFSET" (THE LEFT WING IS LONGER THAN THE RIGHT). EXCESS OFFSET CAUSES REVERSE BANKING AND A SMALL LOW POWER CIRCLE.

WHEN A WOUND RUBBER MOTOR IS ATTACHED TO THE EZB, THE MOTOR STICK WILL TWIST AND BEND. THE EZB WILL THEN TAKE ON:

Ⓐ WING TWIST/SKEW Ⓑ TAIL TWIST Ⓒ STICK BEND Ⓓ TAIL BEND

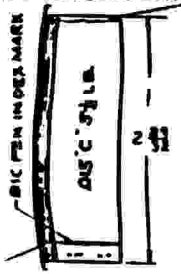


THE AMOUNTS WILL DEPEND ON THE STRENGTH OF THE MOTOR STICK RELATIVE TO THE RUBBER MOTOR.

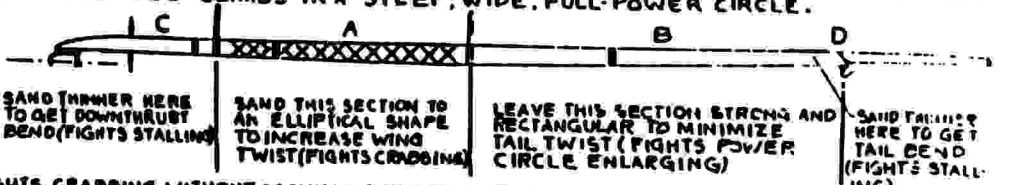
ADDITIONALLY: WHEN LAUNCHED AT HIGH TORQUE, THE LEFT WING WILL DEVELOP "FLARE", DUE TO THE UNEVEN AERODYNAMIC LOADING ON THE LEFT WING SPARS. THE AMOUNT DEPENDS ON THE RELATIVE STRENGTH AND TAPER OF THE LEFT FRONT SPAR.

A COMBINATION OF "WING TWIST/SKEW" AND "FLARE" PROVIDES THE ADDITIONAL LEFT WING LIFT REQUIRED TO OFFSET THE HIGHER TORQUES. INSUFFICIENT LEFT WING LIFT RESULTS IN "CRABBING/STALLING".

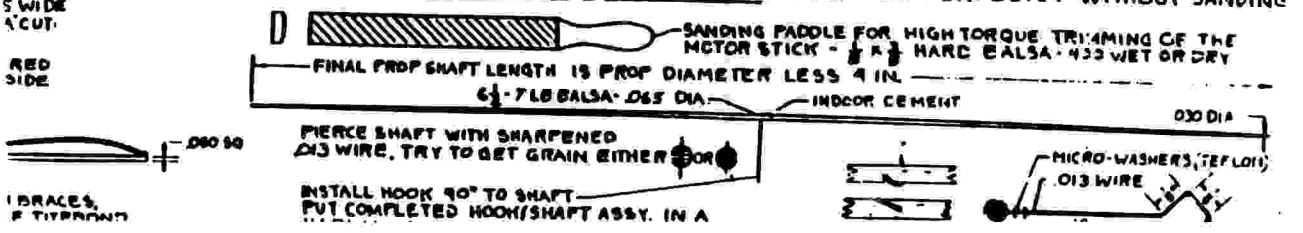
EDGES OF RIB STOCK BEFORE SLICING RIBS



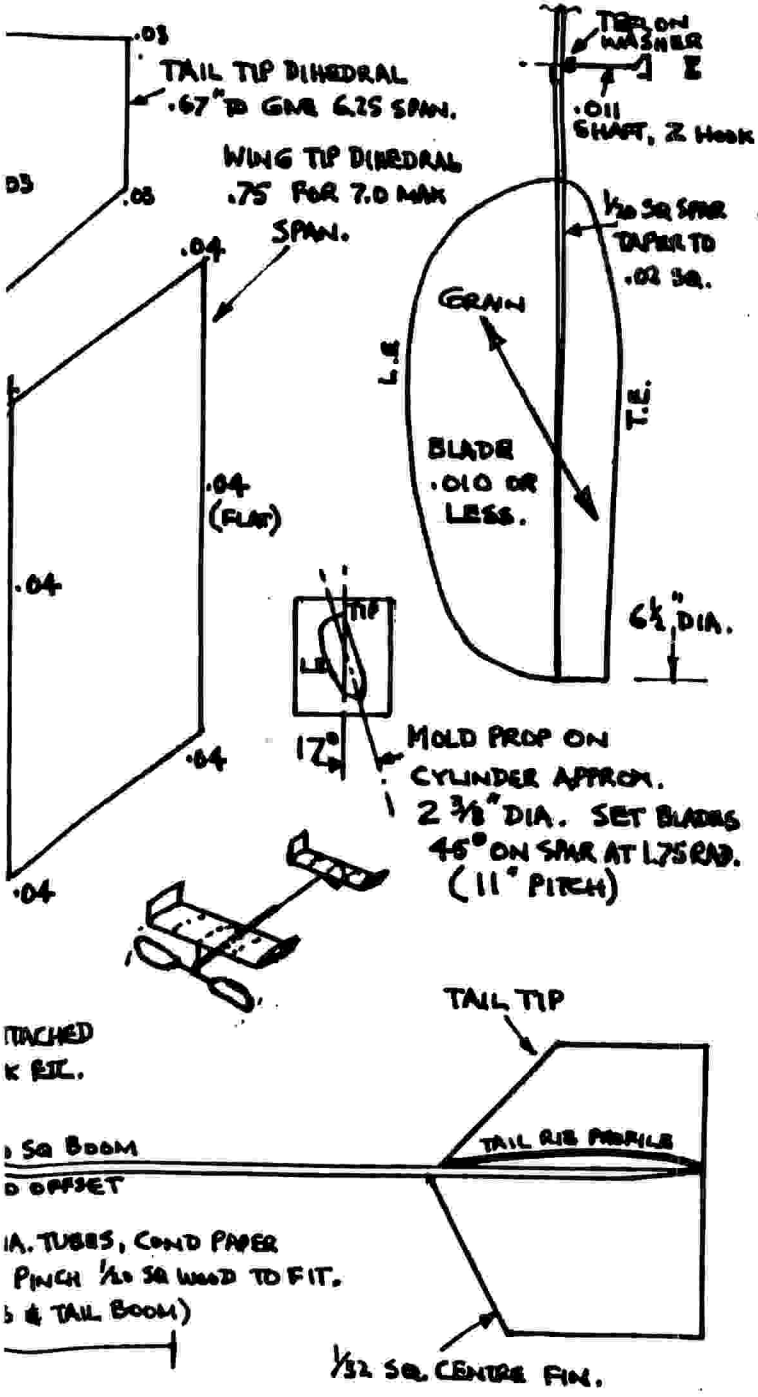
HIGH CEILING FLYING PROCEDURE: ADJUST FOR 30-40 FT. LEVEL CIRCLE USING WING INCIDENCE AND TAIL TILT. NO LEFT RUDDER. DO NOT CHANGE THESE SETTINGS WHEN ADJUSTING FOR HIGH POWER FLIGHT. INCREASE POWER UNTIL "CRABBING/STALLING" DEVELOPS. ELIMINATE CRABBING/STALLING BY GRADUALLY WEAKENING THE MOTOR STICK TORSIONALLY AT A TO INCREASE THE FULL POWER "WING TWIST/SKEW". CAREFULLY SAND THE MOTOR STICK AS SHOWN BELOW UNTIL THE EZB CLIMBS IN A STEEP, WIDE, FULL-POWER CIRCLE.



"FLARE" FIGHTS CRABBING WITHOUT MAKING THE RIGHT WING NEGATIVE. INCREASE "FLARE" BY LIGHTLY SANDING THE BOTTOM OF THE LEFT FRONT SPAR, EITHER AT THE ROOT OR OVER THE ENTIRE LENGTH OF THE SPAR. THE WING SHOWN FLARES PERFECTLY WITHOUT SANDING



MEET 6 APRIL 16,17 MAC DILL AFB.
MASS LAUNCH - MIAMA PEANUT - 2:00 SAT.
FAC GOLDEN AGE - 5:00 SAT
COCONUT - 2:00 SUNDAY



TIDDLY-WINK 2

MINI-STICK : JOHN BARKER MAY '82

JOHN BARKER HAS (6) BEEN DEVELOPING THIS AT MAC DILL + DELTA MIAMI MEETS

HANGAR PILOTS WHO SHOULD BE GETTING FLYING ACES NEWSLETTER

FAC SCALE EVENT

1. Doc Martin	13
2. Millard Wells	9
3. George Nunez	8
4. Walt S CHLESINGER	6
5. Wayne Trivin	4
6. Carl Hedley	2
6. Jake Larson	2

NO-CAL SCALE EVENT

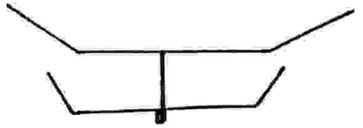
1. Dick Obarski	36
2. Dave Linstrum	22
3. Tom McCoy	20
4. Doc Martin	19
5. Walt Everson	12
6. Sidney Gilbert	10
7. Bill Stoutenburg	9
7. Walt Schlesinger	9
9. Millard Wells	4
10. Don Brimmer	4

EMBRYO ENDURANCE EVENT

1. Dave Linstrum	26
2. Wayne Trivin	20
3. Sidney Gilbert	14
4. Terry Patterson	13
5. Walt Schlesinger	10
5. Bill Criss	10
7. Carl Hedley	3

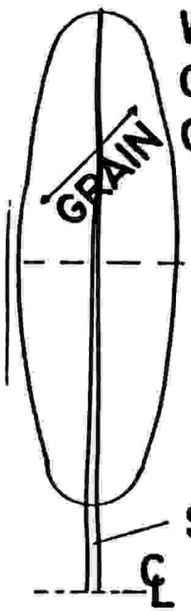
ALSO FAC MASS LAUNCH PILOTS DON BRIMMER, RIC CHOATE, DICK HARDMASTLE, JOE NUZZER AND ALL OF THE PILOTS IN LA LA LAND.

$9.00: FLYING ACES
3301 CINDY LANE
ERIE, PA.
16506



FRONT VIEW
FLY TO LEFT

PROP .013 "C"
WET FORM
ON 3" DIA
CYL @ 15°





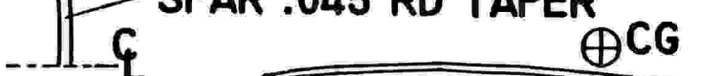
SLICE .032X.032

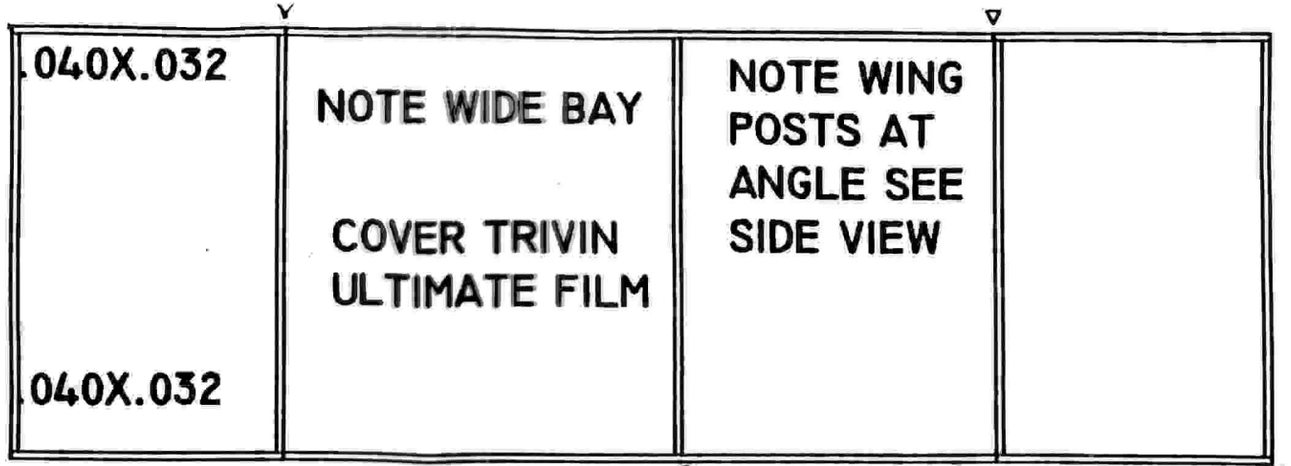
WING 3/4"

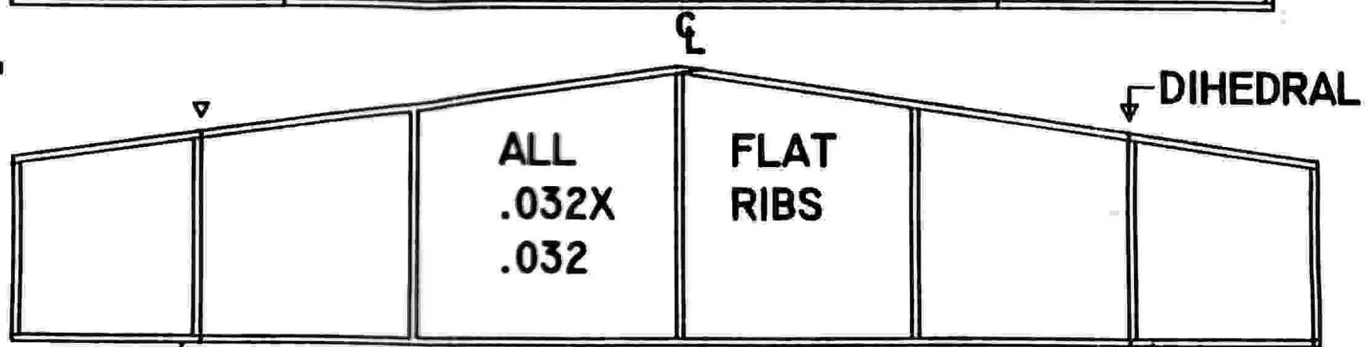
DIHEDRAL JIGS

STAB 110°

SPAR .045 RD TAPER







ENTIRE MODEL 6 LB IMS BALSA

TAGLIAFICO/GITLOW
NO-TWIST WING POSTS .045 RD

FINS @
70°

1/8X3/32X5

1/16X1/8 TAPER TO 1/32

3/16 UP

PAPER TUBES

HARLAN PIGTAIL
ON 3/32 OFFSET 3 DEG LEFT

.010 TENNY HOOK
AND PROP SHAFT

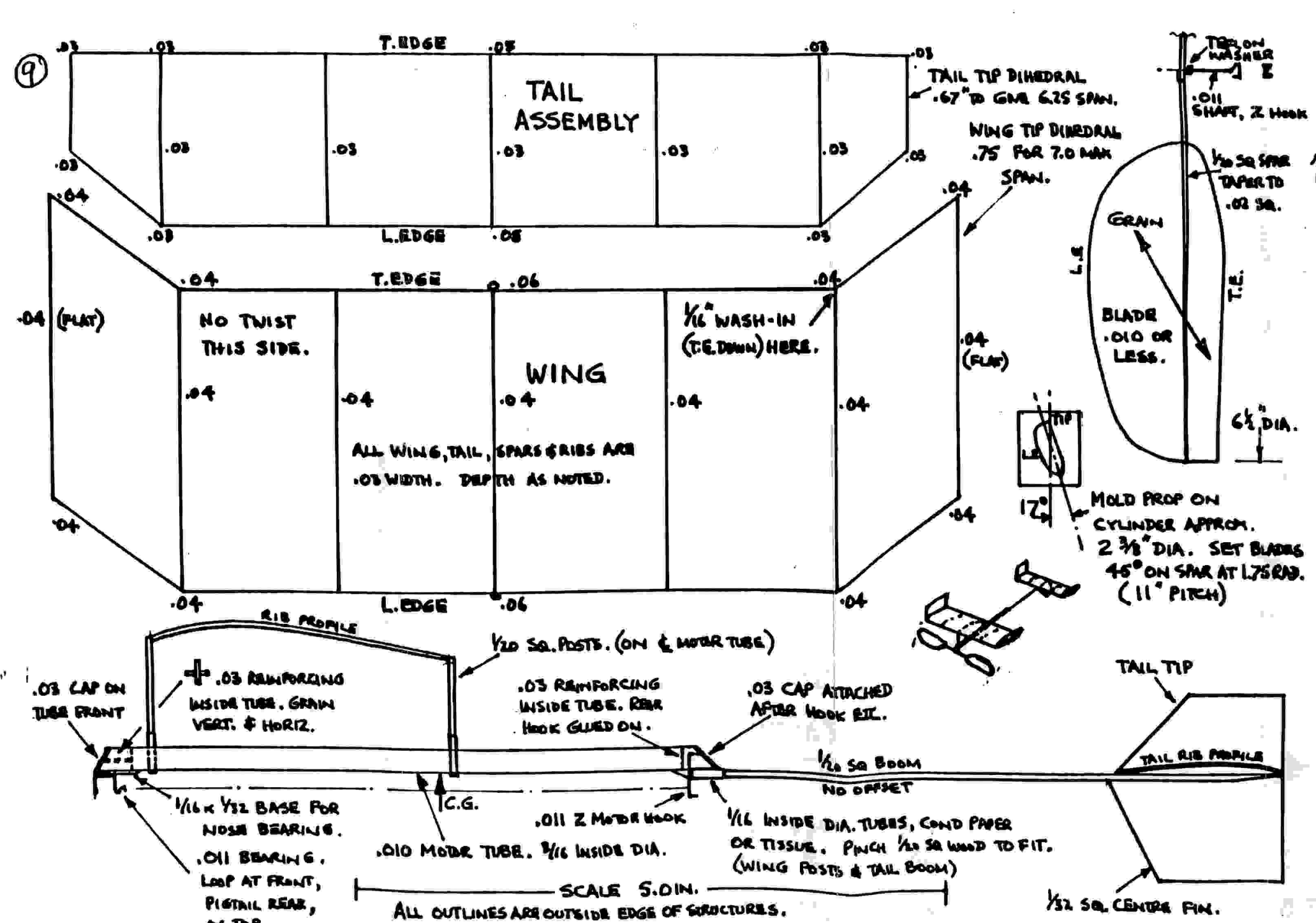
MOTOR:.025X.042 TAN II

MINI-STICK RULES: 2.5" CHORD
MAX 7" PROJ SPAN, 5" STICK, 10" OAL
STAB MAX 50%, MAX 7" PROP, .43GM

ANOTHER EXCLUSIVE HANGAR PILOT FULL SIZE PLAN

BISCAYNE BABY MK II MIAMA

BY DAVE "VTO" LINSTRUM 1/94 AUTOCAD RELEASE 12 REV 1/28



TIDDLY-WINK 2

MINI-STICK : JOHN BARKER NOV '93

Covering With Mylar--A Different View

Here's another way to adhere mylar films to balsa. This technique uses no spray cans, no rubber cement, no thinner, no smelly solvents. It was suggested by Joe Krush and I can testify to its effectiveness.

First, go to an art supply store, not a hobby shop, and buy a tube or jar of acrylic matte medium. This is a thick paste-like substance used by artists. It costs around $5. Also get a 6/0 or similar small artist's brush. You want a very small brush so that you don't add extra weight with the adhesive. That's all the supplies you need.

Dilute about a teaspoon of the matte medium with tap water in a jar lid or small medicine bottle. Use about 5 parts water to 1 part matte, or dilute until it looks like milk (very runny). Let the mixture stand for about an hour before using. It takes a while to dissolve completely.

For this procedure it is advisable to use a frame. The film must be taut and you need both hands to work with. Attaching the film to a frame solves both problems. Since you will be wetting your structure, it will warp if the film is not kept taut. Choose a warm day or cover in a warm room. The warmer, the better since the adhesive will dry quickly minimizing warping.

Begin by laying the part to be covered upside down on the film. While holding the part in place with one hand, paint the diluted glue around the outside edge with the 6/0 brush, touching the wood and the mylar with the brush. Ribs are optional. I leave them alone. The adhesive will dry in about an hour.

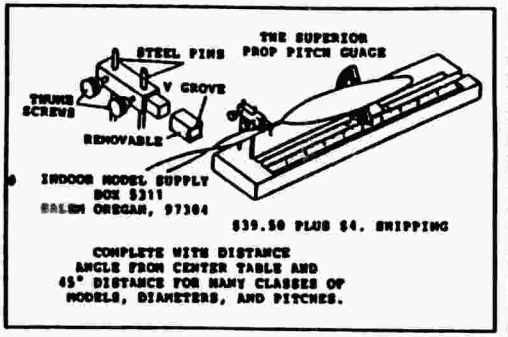
The parts are very easy to cut free with a double-edge razor because there is no gooey rubber cement clogging up the blade. You'll find that the mylar is very securely adhered to the balsa. No loose spots. Unfortunately, the film cannot be repositioned.

I just completed a wing, stab and rudder for a new EZB using this technique and none of the parts warped. This method is highly recommended.

Outrageous Prop Pitch Gauges

One of the most popular gadgets used by today's expert modelers is the prop pitch gauge. And for good reason. A good prop pitch gauge allows you to set the pitch for each blade and to change that pitch as the need arises. The best ones will fit any type of indoor prop from a Peanut to F1D and are portable enough to be carried in your flight box. This is important because a damaged prop will need to be reset during competition or an improperly working prop will need to have its rpm changed.

As a builder, you have several options. You can purchase one of the two ready-made gauges described below, or make your own. All of them work on the principle of a sliding triangle or protractor which measures the pitch at a certain radius from the prop shaft.



The latest adjustable prop pitch gauge comes from Lew Gittow of IMS. It is a well constructed hardwood and metal fixture which allows you to "adjust the pitch to the conditions of the flying site, rubber, motor and model." Its advantages are adjustable pitch, ability to replace broken blades accurately, change blades and ensure equal pitch of both blades. It comes complete with distance angle from center table and 45 degree distance for many classes of models, diameters and pitches. It breaks down easily for transport. It has been endorsed by Stan Chilton. It is available from IMS, Box 5311, Salem, Ore. 97304. The price is $39.50 + 4.00 p+h.

A second adjustable pitch gauge is made by Les Garber and has been on the market for some time. It is also a quality hardwood and metal fixture and is similar to the IMS gauge, except that the triangle is a fixed 45 degree, not a protractor and pitch is read directly on the fixture. This gauge can be used with any type of indoor model and will set the pitch with precision and stop prop wobble. Prop wobble, by the way, is usually caused by the blades having two different pitches, not by a bent shaft or lack of static balance. This gauge also breaks down to fit in your flight box. You can get it from G & L Aero, 2324 E. 5th St., Duluth, MN. 55812. The price is 12.95 + 2.00 p+h.

A third pitch gauge is available from Jim Jones, 38631 Ledgestone Dr., Clinton, MI. 48035. Please write to Jim for details.

Finally, if you would like to make your own pitch gauge, I would like to refer you to an article by our Canadian friend Bill Henderson. Get a copy of NFFS Digest for Aug/Sept 1988. In it you'll find a complete construction drawing and text for making an excellent pitch gauge. I made one when the magazine first came out and have been using it ever since. Happy pitch gauging, gang!

ALL ABOVE FROM STAN FINK'S DOME DUSTER

(11) FLYING ACES REPORT:

As Flying Aces squadron 11 MIAMA flies 4 FAC events each indoor meet. Below is a note from Roy Courtney who keeps the Kanone records for FAC. All Hangar Pilots who fly in these events should send $9.00 to FLYING ACES GHQ, 3301 Cindy Lane, Erie, Pa. 16506 Not only is it a great newsletter, but it will report on your progress toward a Blue Max. We also fly outdoors in FAC events and below Lt Col. Steve Bacom of the FAC Mosquito Sqdn, #14 lists the rest of 1994's outdoor meets at Palm Bay. and on page 13 is a flyer for the first of these..Don Brimmers'meet on April 23 & 24. Even Millard Wells' famous ROW meet is listed as an FAC Meet this year with three classes PEANUT, JUMBO (Coconut) and FAC scale so start building floats for those olderR models that won't mind a dunking .

FROM ROY

I'VE BEEN UPDATING THE KANONES FOR THE NEXT EDITION OF THE FLYING ACES NEWSLETTER AND I MANAGED TO PICK UP ALL OF YOUR KANONES FROM ISSUE 150 THROUGH 162 WITH THE EXCEPTION OF ISSUE NUMBER 158. IF THERE ARE FAC KANONES TO BE AWARDED IN THIS ISSUE PLEASE FORWARD SAME TO ME.

I'M SURE ALL YOUR GUYS WILL BE PLEASED TO SEE THEIR PAST WINS RECORDED FOR ALL TO SEE AND COVET.

I WILL PICK UP YOUR KANONES FROM YOUR NEWSLETTER FROM NOW ON SO NOTHING EXTRA WILL BE REQUIRED OTHER THAN TO POSSIBLY HIGHLIGHT THEM FOR ME.

SINCERELY YOURS,

ROY W. COURTNEY
P O BOX 88
ELMA, N.Y. 14059

Roy Courtney

FLYING ACES CLUB
SQUADRON # 14
MOSQUITO SQUADRON

Lt. Col. Steve Bacom, C.O.
836 Banbury Drive
Port Orange FL. 32119
904-788-7309

Lt. Harry Stein, Adj.
751 Kenwood Drive
Port Orange FL. 32119
904-767-0770

COMPETITION BULLETIN

March 2, 1994 Vol. 4 # 1

The following will be the Mosquito Squadron's contest schedule for 1994. This year we are going to include the new FAC event (Electric/CO/2 O. T. Gas) at a couple of meets to see if there will be any interest. The rules are included in this bulletin on the last page. If you have any questions, please contact Steve Bacom, Harry Stein or John Tudor.

SAM 46 SPRING OPENER

Palm Bay, Florida April 23 & 24, 1994

All events may be flown on either day, but must be completed on the same day.

FAC Peanut Scale	FAC Jumbo Scale
FAC Rubber Scale	FAC Power Scale
FAC Golden Age Scale	FAC No-cal Scale
FAC O. T. Rubber	FAC Embryo Endure

ONE DESIGN CONTEST

Palm Bay, Florida June 11 & 12, 1994

All events may be flown on either day, but must be completed on the same day.

FAC Embryo Endurance	FAC Rubber Scale
FAC Peanut Scale	FAC Golden Age Scale
FAC Jumbo Scale	FAC Power Scale
FAC No-cal Scale	FAC Old Time Rubber

1994 S.E. SAM AMO NOST. CHAMPS

Palm Bay, Florida September 3, 4 & 5, 1994

All events may be flown on either day, but must be completed on the same day.

FAC Embryo Endurance	FAC Rubber Scale
FAC Peanut Scale	FAC Golden Age Scale
FAC Jumbo Scale	FAC Power Scale
FAC No-cal Scale	FAC Old Time Rubber

(New event FAC Electric/CO/2 O. T. Gas)
Rules attached.

SAM 46 FALL MEET

Palm Bay, Florida November 19 & 20, 1994

All events may be flown on either day, but must be completed on the same day.

FAC Peanut Scale	FAC Jumbo Scale
FAC Rubber Scale	FAC Power Scale
FAC Golden Age Scale	FAC No-cal Scale
FAC Old Time Rubber	FAC Embryo Endurance

(New event - FAC Electric/CO/2 O.T. Gas) - Rules attached.

KING ORANGE INTERNATIONALS

Palm Bay, Florida Dec. 30, 31 & Jan 1, 1995

FAC EVENTS WILL ONLY FLY ON DECEMBER 30th to allow the FAC flyers to attend Doc Martin's indoor meet December 31st and January 1st.

FAC Rubber Scale	FAC Jumbo Scale
FAC Peanut Scale	FAC Power Scale
FAC Golden Age Scale	FAC No-cal Scale
FAC Old Time Rubber	FAC Embryo Endurance

RULES: FAC ELECTRIC/CO/2 OLD TIME GAS.

1. Scaled down version of any Old Time gas model (kit or plan) designed before 1946.
2. Maximum wing span 25 (twenty-five) inches.
3. Power: Mini electric or CO/2.
4. Dethermalizers are allowed if snuffer tube is used.
5. Flight Score:
   a. Total of 3 flights (C.D. determines max.)
   b. Fly-off for tie.

Hope to see you at the Spring Opener. Steve.

SUPPORT FAC!

I HAVE SEVERAL ITEMS TO DISPOSE OF - WOULD YOU PUBLISH THIS INFORMATION?

(12)

1- MATTEL VAC-U-FORMER

1-TELCO TURBOTANK (MODEL 3000) CO_2 ENGINE

2-TELCO (REGULAR) CO_2 ENGINES

ANY INTERESTED PARTIES CAN CONTACT ME AT 27 TURNPAUGH TRAIL, PERU, IN 46970-1057

JAMES CARDEN

FROM ED WHITTEN'S NEW YORK INDOOR TIMES

JOHN GANSER'S COMMENTS ON NO-CAL SCALE AT THE USIC

Enclosed is my check for $12.00 to help pay costs for another round of 10 issues of NYIT. I'm delighted that you are continuing your excellent newsletter; I consider it almost a piece of nostalgia. Maybe I just recall all the good times flying at Columbia. I wonder where all those indoor modelers went. We see very few of them at Lakehurst.

An event I always liked was NO-CAL. It was a fun event at Columbia with few rules....(FAC rules...ed...) It wasn't until my first time at Johnson City that I saw the No-Cal regulations as published by the NFFS. I've enclosed a copy for your info. These rules have resulted in a semi-scale event where the model is more of a cartoon or caricature of the full size craft. As you can see, there are no scale or appearance points; it is strictly a duration event. So, with a lot of wing area and a large prop, they will fly much more like a Limited Pennyplane rather than a scale model. I've improved my time from 2 minutes to over 5 minutes, which is only good enough to place in top 5 or so at Johnson City...where the guys get better every year.

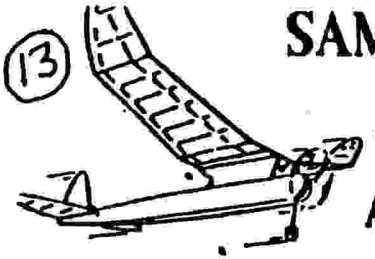
NFFS — NO-CAL PROFILE SCALE (NOT FAC)

1. A recognizable model of a full-scale aircraft, with a wing span not exceeding 16".
2. The weight of the model (excluding the rubber motor) shall be no less than 6.2 grams (two pennies).
3. No fancy gadgets permitted—plastic prop is permitted. Balsa and Jap tissue shall be the main construction materials. Use of hi-tech materials such as carbon fibre, boron, et al is not at all permitted.
4. Model must contain control surface outlines, window outline, and registration markings. Model must have full landing gear, i.e., as the full-scale aircraft (no profile gear).
5. Win based on best of five flights (20 second minimum and 2 attempts/flight).

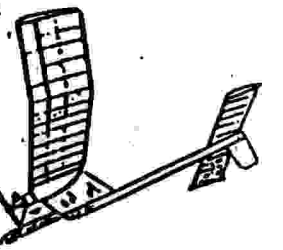
A FEW SATISFYING INSULTS

- Fred Allen (1894-1956), radio comedian: "California is a fine place to live in — if you happen to be an orange."
- Ludwig van Beethoven (1770-1827), to a fellow composer: "I liked your opera. I think I will set it to music."
- Al Capp (1909-1979), cartoonist, on modern painting: "Abstract art? A product of the untalented, sold by the unprincipled to the utterly bewildered."
- Sir Winston Churchill (1874-1965), on the socialist politician Clement Attlee: "A modest little man with much to be modest about."
- Georges Clemenceau (1841-1920), French statesman: "America is the only nation in history which miraculously has gone directly from barbarism to degeneration without the usual interval of civilization."
- W.C. Fields (1879-1946), on being asked whether he liked children: "Boiled or fried?"
- Margaret Halsey (1938-), American writer: "Englishwomen's shoes look as if they had been made by someone who had often heard shoes described, but had never seen any."
- Henry Labouchere (1798-1869), English statesman, on William Gladstone, British Prime Minister: "I don't object to the Old Man's always having the ace of trumps up his sleeve, but merely to his belief that God Almighty put it there."

(13)



SAM 46 FREE FLIGHT CONTEST
PALM BAY, FL.
APRIL 23 - 24, 1994



CD-Don Brimmer
5924 16th Lane N.E.
St. Petersburg, Fl 33703
(813) 525-6667
Alternate CD
Lee Alonzo
1012 W. Peninsular St.
Tampa, FL 33603
(813) 229-1083

HEADQUARTERS- Days Inn
Rt 192 & I-95
(407) 724-5840

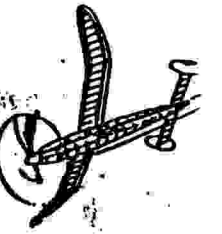
ALL EVENTS 2 MINUTE MAX
ALL GAS SHOOTOUT - SUNDAY 7 A.M.

O.T. A-B Pylon
O.T. C Pylon
O.T. A-B Fuselage
O.T. C Fuselage
020 Replica
O.R. Rubber Cabin/ Stick LG
O.T. Rubber Cabin/Stick SM
O.T. Catapult Glider
O.T. HLG
1/4A Nostalgia
1/2 A Nostalgia
A Nostalgia
B-C Nostalgia
AMA P-30
AMA 1/2A Gas J/SO
AMA A Gas
AMA B-C Gas
AMA HLG J/SO
R/C Texaco 1/2A
R/C Open 1/2A Texaco
R/C A Texaco
R/C Open 1/2A Texaco Scale
Open 1/2 A Texaco and Texaco Scale
Any 1/2A Engine using Cox tank or Perfect #4 Tank

Contest Times:
SAT. 7AM - 5PM
SUN. 7AM - 3PM



FAC EVENTS
FAC Peanut Scale FAC Rubber Scale
FAC GoldenAge FAC OT Rubber FAC Jumbo Scale
FAC Jumbo Scale FAC Power Scale FAC Power Scale
FAC Nocal Scale FAC Embryo Enduro



Events may be flown either day but must be completed on the same day as started. This includes Flyoffs.
Registration closes NOON SUNDAY

Collecto- Days Inn
Saturday Night
time announced
at the field

Engine Runs
O.T. Ignition - 20 Sec ROG, 15 Sec HL
O.T. Glow 12 Sec ROG, 9 sec HL
Nostalgia 9 Sec Ignition - 15 Sec ROG - 12 Sec HL



HELMETS REQUIRED FOR ALL CHASE BIKES

FAC Events $5.00 total for unlimited entry in FAC events only.
NO AWARDS other than KANNONES for FAC events.
OPEN- $8.00 first event plus $3.00 additional $20.00 MAX
SENIOR- $7.00 first plus $2.00 additional $15.00 MAX
JUNIOR- $5.00 total

RELEASE I the undersigned contestant/parent, do hereby certify that I release any and all organizations connected with this meet from all claims which may arise with said meet. I further certify that I am the builder of all models entered and flown by me as covered by A.M.A, FAC and SAM rules.

Name:_____ A.M.A. No:_____
Address:_____
City:_____ State:_____ Zip:_____

City of Los Angeles
High School Math Proficiency Exam

Name:_____ Gang:_____

1. Johnny has an AK47 assault rifle with a 30 round clip. If he misses 6 out of 10 shots and shoots 13 times at each drive-by shooting, how many drive-by shootings can he attempt before he has to reload ?

2. Jose has 2 ounces of cocaine and he sells an 8 ball to Jackson for $320 and 2 grams to Ernesto for $85 per gram, what is the street value of the balance of the cocaine if he doesn't cut it ?

3. Rufus is pimping for three girls. If the price is $65 for each trick, how many tricks will each girl have to turn so Rufus can pay for his $800 per day crack habit ?

4. Miguel wants to cut his 1/2 pound of heroin to make 20% more profit. How many ounces does he have to cut ?

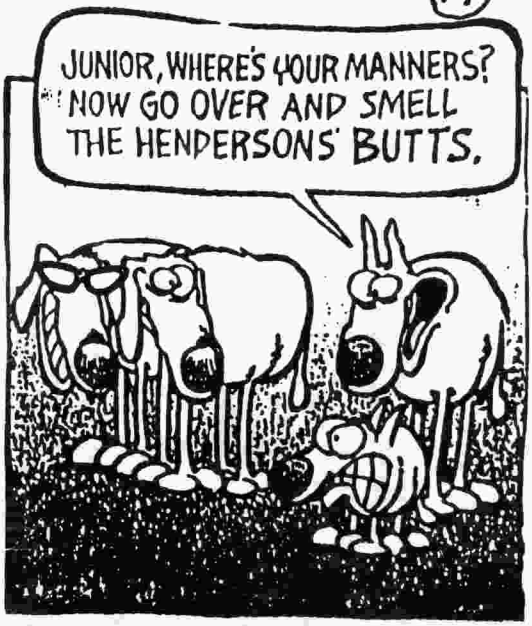
5. Willie gets $200 for stealing a BMW, $50 for a Chevy, and $100 for a 4x4. If he has stolen 2 BMW's and 3 4x4's, how many Chevy's will he have to steal to make $800 ?

6. Raoul is in prison doing 6 years for murder. He got $10,000 for the hit. If his common law wife is spending $100 per month, how much money will be left when he gets out of prison and how many years will he get for killing the bitch that spent his money ?

7. If the average spray can covers 22 square feet and the average letter is 3 square feet, how many letters can a tagger spray with 3 cans of paint ?

8. Hector knocked up 6 girls in his gang. There are 27 girls in the gang. What percentage of the girls in the gang has Hector knocked up ?

(14)



THANKS, CARL HEDLEY

DOME DUSTER :

Great Effort Pays Off For Juniors

Vern Hacker's donor instrument program has raised over $5,600 for the AMA junior free flight fund and Muncie museum. Donations are still being accepted for the grasper, scissors, eye scalpels and cautery. Write or call Vern at 25599 Breckenridge Dr., Euclid, OH 44117, 216-486-4900.

JUST BECAUSE I'M PARANOID DOESN'T MEAN THEY'RE NOT OUT TO GET ME.

THINNEST YET:

NEW POLYMICRO PMIL

PMIL ~~Polyester~~ NEW EB is a new indoor film being offered by Richard Obarski and Wayne Trivin. It is the lightest polyester film manufactured, and the last you'll have to buy. Ideal for beginners in FID, who can't handle microfilm yet, to repairs and even replacement, in some applications, on microfilm models. Check out the specifications below.

NEW 3/94

SPECIFICATIONS

	Wght. in oz. per 100 sq. in.*	Thickness in inches
Ultra Film (Ray Harlen)	.0045	.00006
Ultimate (Wayne Trivin)	.00366	.000047
~~POLYMICRO~~ PMIL	~~.00305~~ .002-71	.0000353
Microfilm	.0015 Appx.	Varies

*Above weights determined using a Harlen beam scale. Weight for microfilm varies depending on sheet color after pouring.

Prices

~~Polyester~~ PMIL 15' for ~~$25.00~~ $20.00 freight included

Ultimate, new reduced price- 20' for $16.00 freight included

Send check or money order to; Wayne R. Trivin
7408 W. Hanna Ave.
Tampa, Fl. 33615

WHAT'S ON IN FREE FLIGHT ?

Call Hot Line Fri. nite 1-305-858-6363

April 10- 16 LAKELAND FL. Sun and Fun Fly in

APRIL 16,17 MacDill,Tampa MIAMA INDOOR MEET 6 Mass Launch FAC Golden Age
APRIL 23,24 PALM BAY, SAM SPRING MEET with FLYING ACES EVENTS. Don Brimmer 813-525-6667
MAY 14,15 MacDill ,Tampa MIAMA INDOOR MEET 7 FAC Mass Launch Race Planes
MAY 28,29 PALM BAY Rimert's Rally CD Terry Rimert 1-904-266-4795
JUNE 2,3,4 JOHNSON CITY..THE BIG ONE.. NFFS USIC. Indoor Champs.
JUNE 11,12 PALM BAY Gollywock. CD Lee Campbell 1-407-686-7824 – FLYING ACES EVENTS
JUNE 18,19 Pensacola Fiesta of 5 Flags. CD Bob Junk 1-904-968-9619
JULY 8,9,10 GENESEO,NY..FLYING ACES NATS
JULY 2,3 PALM BAY Florida State Outdoor Free Flight Champs. R.Hinson 1-904-344-5931
JULY 16-24 AMA NATS LUBBOCK.TX Indoor & Out Free Flight
JULY 30 ISLAMORADA,KEYS Wells Great Keys ROW Meet. This year a FAC Meet
AUG 6,7 PALM BAY Dixie Nats CD Dan McCall 1-813-763-7020
SEPT. 3,5 PALM BAY SAM and Nostalgia Champs Champs CD Ron Sharpton 1-904-767-6138
SEPT. 17,18 PALM BAY District V FF CHAMPS CD Dave Platt 1-407-724-2144

SEPT. 12-16 MUNCIE IND-SAM CHAMPS - 1939 KORDA CD-TOM McCOY

THE HANGAR PILOT

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

Jim- You missed a good one in March. as you remember the MIAMA GRAND PRIX was once the Coconut and Pistachio events. This year Coconut + Pistachio were listed as separate events hence no need for GRAND PRIX except as a note on Page one. Remember Pistachio flying is listed on Friday morning BUT CAN BE FLOWN IN GYM ALL DAY FRI & SAT Doc