THE HANGAR PILOT

ONE AND ONLY!

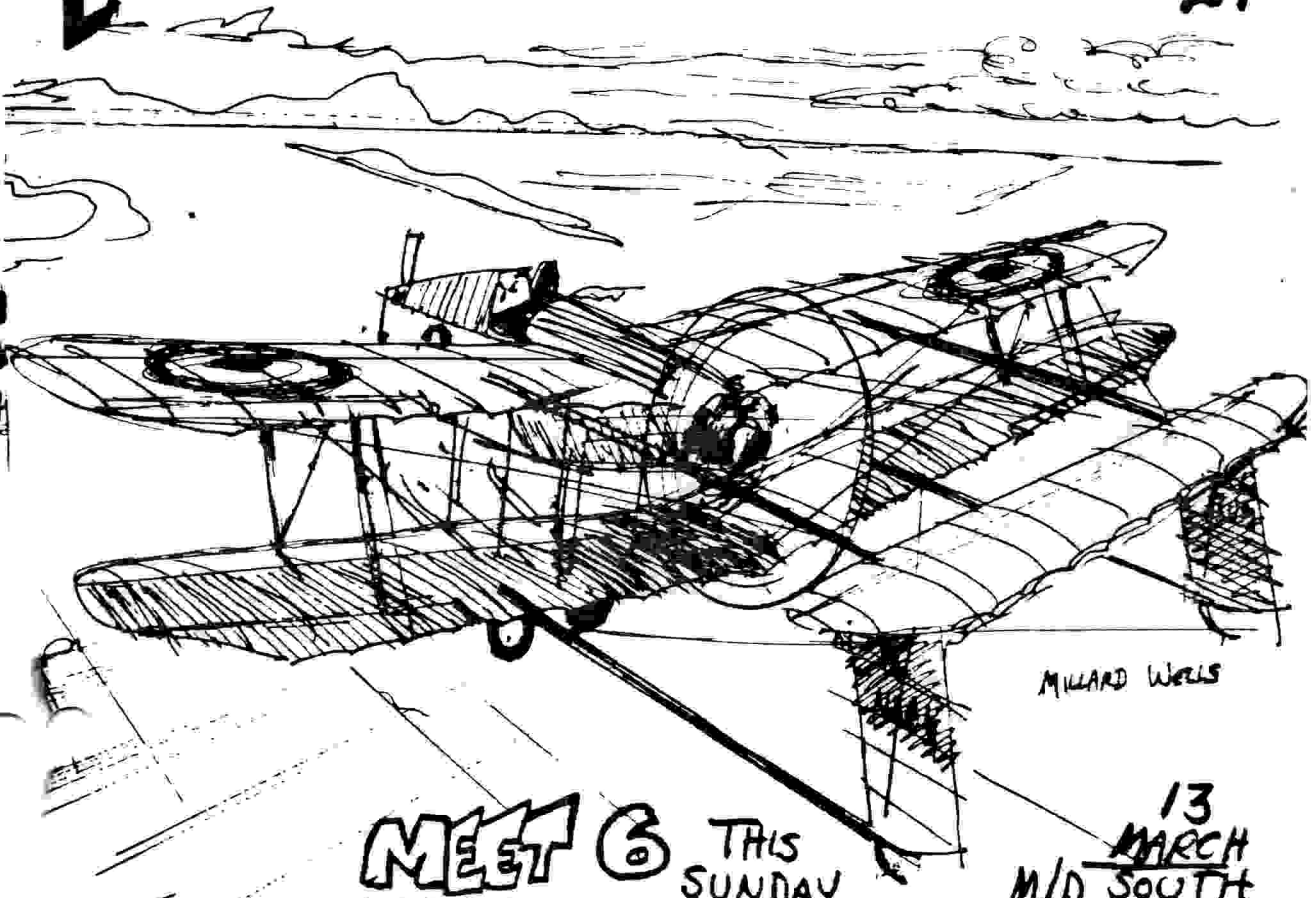
THE MIAMI INDOOR AIRCRAFT MODEL MEET

ISSUE 85
MARCH 85
AMA CLUB 986 "E"

PISTACHIO SCALE ISSUE

INDOOR MEET MAR 13

PISTACHIO MEET MAR 27



MEET 6 THIS SUNDAY → 13 MARCH M/D SOUTH 9-5

(1) RESULTS - MEET 5, M/P SOUTH, CD MIKE ARAK FEB 27 1983

PEANUT SCALE EVENT:

1. Dave Kiefer	6 Points	(Sop. Tripe 38.0)	1 stat., 5 Flight	(21.2)(21.0)
2. John Martin	6 Pts.	(Dorn. Komet 24.5)	5 stat., 1 fly	(46.9)(52.0)
3. Mike Arak	9 Pts.	(14-Bis 34.2)	2 stat., 7 fly,	(20.0)(20.7)
X John Martin	8 Pts.	(Stratoplane-Pistach. 25.0)	4 stat, 4	(30.0)(31.0)
X John Martin	11 Pts.	(Dorn. 212 29.3)	3 Stat., 8 fly	(12.2)(19.2)
4. Millard Wells	9 Pts.	(Wee Bee 23.5)	7 Stat., 2 fly	(49.6)(46.5)
X. M. Wells	13 pts.	(Kaw. Bipe. 23.5)	7 Stat., 6 fly	(23.4)(19.6)
5. Walt Everson	13 Pts.	(Found 19.5)	10 Stat., 3 fly	(42.7)(46.1)
X. M. Wells	16 Pts.	(Vagabond 24.3 Pist.)	6 Stat., 10 Fly	(19.6)
X. M. Wells	18 Pts.	(Moustique 21.0)	9 Stat., 9 Fly	

SCALE EVENT:

1. Dave Kiefer Lacey, 82.2. Stat. 41.1 fly.... 123.3
2. Millard Wells, Wee Bee, 70.2 Stat, 48.0....118.2
3. John Martin, Alco, 79.5 stat., 38.4 fly,..117.9
4. Mike Arak, 14-Bis 70.2 Stat., 34.0 fly,..104.2

GREAT GLIDER TIMES ! !

OLD TIME R.O.G.

1. Mike Arak	4:05
2. Walt Everson	3:42.9
3. Millard Wells	2:35
5. John Martin	2:04
4. Dave Kiefer	2:25

EASY B

1. Mike Arak	3:59
2. Dave Kiefer	3:13
3. M. Wells	3:09

PENNY PLANE:

1. Ed Shaw	3:229
2. W. Everson	2:08
3. Mike Arak	:55.5

JUNIOR ENDURANCE:

1. Sue Arak	51.3
2. Heather Arak	48.2

JUNIOR R.O.G.

1. Sue Arak	28.3
2. Heather Arak	25.0

H.L. GLIDER EVENT:
1. Don Bal (41.1)(41.3)

NEW RECORD !!!! 82.4 in 27 foot Gym is a world class performance. !! Congratulations to DON BAL and his "Eliptic 90". 24" span, Wt. 10.3 gm.

JUNIOR GLIDER: 1. David Bal (17.5)(19.5)
2. Steven Bal (16.5)(15.4)

FLA. RECORD → ★ NEW GLIDER RECORD

MEET 5 – It is on days like this when you are glad your hobby is indoor model airplanes. Gail winds and up to 5 inches of rain washed out the final round of the Doral Open, and cancelled the running of the Grand Prix of Miami after only 27 laps, a disaster, but there we were in the gym, having a ball. Gusty conditions indoors did not seem to hurt duration as Don Bal set a new glider record(See results). Meet results show a real tightening of competition and the times between first and last place are very slight in most events. It sure makes for great interest. Ed Shaw entered Penny for the first time and took a first!

THIS SUNDAY-MEET 6 [MAR 13]

THE WORLD'S SMALLEST FLYING SCALE MODELS (2)

C all 'em Grape-Nut, Pistachio, Match-Box, Parlor Scale, etc.

The idea of building the smallest scale model that could fly has always been appealing. I can remember ads in the mid-30'S model mags showing D-7's, and S E- 5's held in the palm of the hand (And about hand-sized) "guaranteed to fly". There is very little data available on this subject. We hope Hangar Pilot readers send us some from time to time to keep us informed. We reprit here the oldest Pistachio plan we could find, A sheet model Dolphin from 1947 Air Trails. We also have plans for Millard Wells 1914 A.D. Scout for a future issue (The plane on the cover). Mr. Wherry wasn't too interested in endurance and seemed willing to settle for some "Snappy flights thrown glider fashion",or "several turns around your parlor". Ken Johnson likes more performance from his "Grapenut" models. We call 'em Pistachios cause we allow either a 8" span or an overall length of 6". We fly to the MIAMA peanut rules AMA 51B. We have included Pistachio with peanut, but have not figured out the proper handicap as yet.Ken Johnson's article,reproduced below, is from Apr.'82 Model Bldr. Bob Andrews has reduced all of Walt Mooney's peanuts to pistachio.Contact H.P.

KEN JOHNSON'S ARTICLE:

Grapenut scale models are those that are smaller than Peanut. I asked around and couldn't find anyone who could come up with a definite set of rules for Grapenut. It seems that any scale model with a wingspan of 8 inches or less will qualify. Although I can't see any reason why the model could not be an 8-inch replica of a Korda Victory, for instance. This could be a scale model of a model.

There are positives and negatives to Grapenut.

The positives are:

- You can fly a smaller model in a smaller area.
- Less critical scale judging.
- Less materials needed to build a Grapenut.
- It is easier to carry more models in a given size box.
- It is a definite challenge to build a tiny scale model, and more of a challenge to make it fly really well.

The negatives are:

- Finding rubber small enough to fly this size model, without making it a zoomer. My 8-inch Piper Vagabond flies on one loop of .017 rubber.
- The use of tweezers is mandatory in the construction of an airplane of this size.
- Wheels and propeller for a model of Grapenut size will need to be handmade.

Building a Grapenut scale model is very rewarding. It's really fun to reach into your model box and pull out an 8-inch Waterman or DH6 and see the looks you get when it climbs out of your hand. If you haven't tried one this small, you're in for a treat.

The selection of the plane you model is important. The wings should be of sufficient area to give ample lift. The fuselage should be long enough to house a fair size motor, and the subject simple enough so that scale detailing wouldn't be a burden.

Doubtless you will need to strip light indoor balsa for the construction. Strip the wood with a metal straight edge or the Jim Jones balsa stripper discussed in my last column. Remember to use the cement sparingly.

Covering with anything heavier than condenser paper is not recommended. An ideal covering material is metalized Microlite (Micro-X Products, P.O. Box 1063, Lorain, OH 44055). It is scale looking and extremely light.

Airplanes with rounded fuselages should be avoided. Can you imagine how small the stringers would be on a Grapenut Gee Bee racer?

Propeller blades of 1/64 sheet balsa are about right. A .015 wire prop shaft and indoor teflon bearings complete the front end assembly (with the balsa nose lock, of course).

Very few plans are available at this time for Grapenut models. Here is one source: David Aronstein, 50 Pasture Lane, Poughkeepsie, NY 12602.

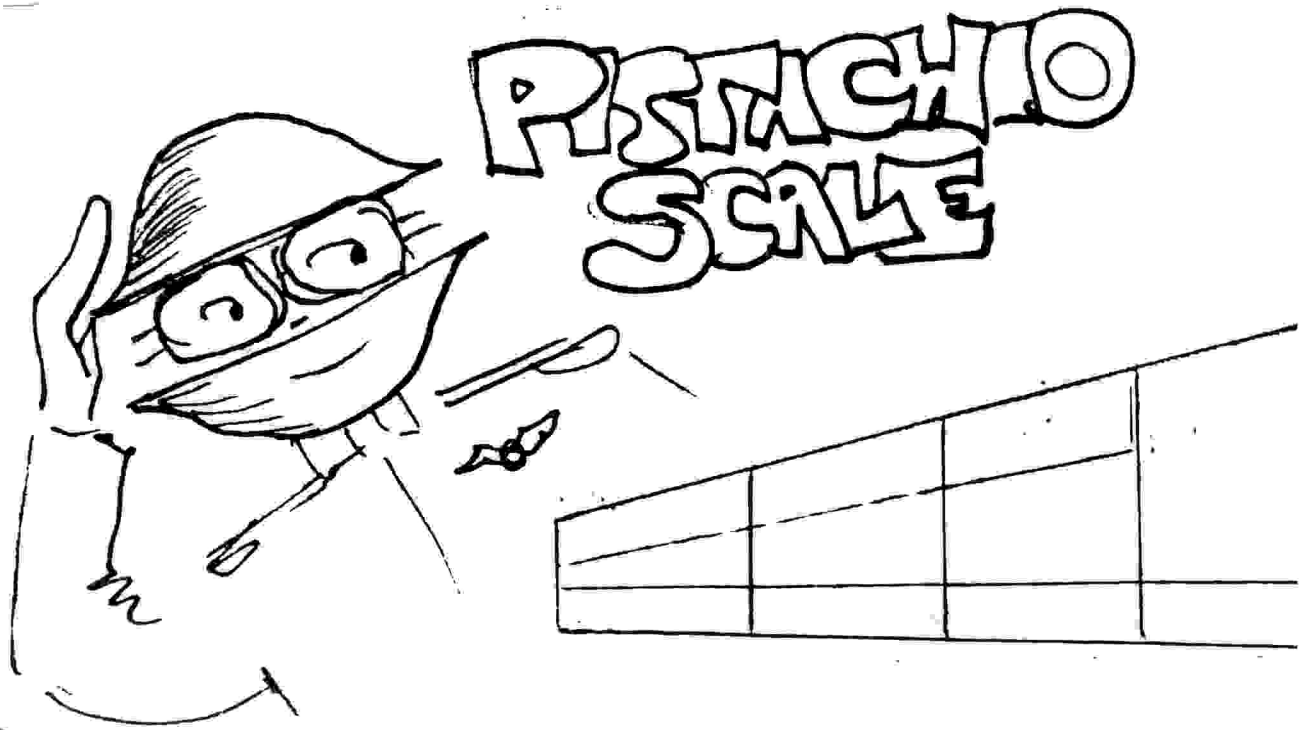
Many quick print/xerox stores can make xerox reductions of your favorite scale or peanut scale plans. Select the reduction that comes to 8 inches or just under. Then simplify the reduction. Reduce the number of wing ribs, stringers and spars. Using sliced wing ribs is recommended. Perhaps the number of fuselage uprights can be reduced.

Covering adhesive should be either thinned Elmer's glue or thinned Aerogloss. How about using a one-strand motor? Make a loop at each end and cement with Hot Stuff. A one-strand motor of .040 should equal a one-loop motor of .020.

③ MORE HISTORIC FIRSTS

It is appropriate that in our pistachio scale issue we announce the results of MIAMA's first pistachio scale contest, at CORAL SHORES SCHOOL in the Keys at mile marker 90 on Feb 20 1983, sponsored by Millard Wells. If we had known his excellent award I'm sure we all would have worked even harder on our entries. Kiefer entered a Ganagobie, Millard had a S.E.-5, a Wee Bee, and a Vagabond, Martin entered a Junkers Stratoplane, Hedley had some 8" Bostonians, Hiscock flew an all sheet DH-6, and Walt Everson Flew his winning FOUND. It is hard to get them going but they WILL fly. Bob Andrews took pictures of the field, and we hope Ken Johnson will use them in his column. A 58 sec. flight won for Walt, and what a prize ! ! A beautiful water-color painting and plaque by Wells, of the take off of the Spirit of St. Louis from Roosevelt Field in 1927. Millard captured the foggy, dangerous, muddy, conditionsof that eary morning take off. After the meet all the MIAMA gang went back to the Well's Studio, and then to the home for a buffet feast. We sure wish that all those non-Florida readers of Hangar Pilot could have been along with us on this wonderful occasion. Thanks, Millard and Jean

We liked it so much we've scheduled another fly-in at CORAL SHORES on Sunday at 9:00 AM. Confirm at 1-305-858-6363
PISTACHIO SCALE EVENT: ALL ENVITED. 21' 7"



SOPWITH DOLPHIN (4)

PINT-SIZE FLYING MODEL OF WORLD WAR I FIGHTER INCORPORATES THE SAME WING ARRANGEMENT AS OUR MODERN BEECHCRAFT

By Joseph Wherry [A 1947 PISTACHIO MODEL. REPRINTED FROM APRIL '47 AIR TRAILS]

EARLY in 1918, British squadrons at the front began to receive an entirely new type of fighter, the Sopwith 5F.1 "Dolphin." As a matter of fact, research discloses that Dolphins were first received by No. 87 Squadron in December of 1917. With its inverted staggered wings and bulldog nose, span of about 32 feet, 6 inches, and four machine guns, it was indeed something out of the ordinary.

The 200-hp Hispano-Suiza engine gave it a top speed of around 122 mph at 10,000 feet; this height was reached in 12 minutes. Maneuverability was excellent and the open space betwen the top planes gave the pilot a fine range of visibility. The two Vickers guns were mounted conventionally on the cowl; the Lewis guns were mounted on the forward spreader between the top planes. These two additional guns fired over the propeller and could be elevated at will by the pilot who had to be a dandy to fly and fire these guns at the same time. No. 87 Squadron remounted the Lewis guns outside the propeller disk on the lower wings where they were fired by means of Bowden controls.

This seldom modelled First War fighter was actually built in fairly large numbers; over fifteen hundred Dolphins were completed of which about 400 were consigned to the Western Front. Nos. 19, 23, 79, and 87 Squadrons were entirely equipped with this ship. No. 85 Squadron received Dolphins to augment their S.E. 5As. Had the war continued longer, Dolphins and Sopwith's 7F.1 "Snipe" would have eventually equipped most of the British fighter units.

Our model of the Dolphin spans just over 8 inches, is constructed mainly of 1/32 inch sheet balsa of medium grade, and will make several turns around your parlor when fitted with the flying propeller before color doping. Two coats of thin color dope will enhance the beauty of your model, but will make it a bit heavy for powered flight. However, a scale propeller may then be fitted and you will still get some snappy flights outside on calm days when you throw it in glider fashion. A satin smooth finish is never given these little jobs by the author; to do so would be to render it incapable of flight because of weight. Enough of this; you'll like these parlor flying scales that look like solids. Let's get started.

Fuselage: Utilizing the template, cut two sides from 1/32 inch flat stock that has been first lightly sanded. Study the assembly views and mark the places where the 1/16 inch crosspieces and No. 4 bulkhead fit. Join the sides together at the rear and install the crosspieces. Next install No. 4 bulkhead. Rubber bands are used to hold sides together until dry. Install the 1/16 inch No. 1 bulkhead and follow with 2 and 3 which are cut from 1/32 inch sheet.

The fuselage top is covered in two pieces with 1/32 inch sheet that has been sanded to a thickness of approximately 1/40 inch. This will allow for easy bending. Use one piece between Nos. 1 and 2 bulkheads. If you use a fairly thick cement you can hold this piece in position until dry, about 3 minutes. Another piece is used between No. 3 bulkhead and the top 1/16 inch square crosspiece. When dry, trim and sand smooth at the edges. The author makes the cockpit by cementing a small piece of bond paper between bulkheads 2 and 3. Draw the cockpit outline on this and cut out with a sharp pointed model building knife.

By checking your plans you will note that a small solid block 1/8 inch thick is cemented in place aft of bulkhead No. 1 on the bottom of fuselage. Cement the 5/32 inch thick nose block in place and trim so as to conform to the dash lines on the template for same. Also trim the bottom of nose to coincide with the dash lines on the side view. Finish by rounding neatly with sandpaper. The nose will then taper from an oval to a flat surface at the point where the lower wings are later mounted. If you intend to power this midget, leave the fuselage bottom uncovered except for the portion aft of the 1/16 inch crosspiece which is covered with bond paper. If model is to be used entirely as a glider, cover the entire bottom with bond paper.

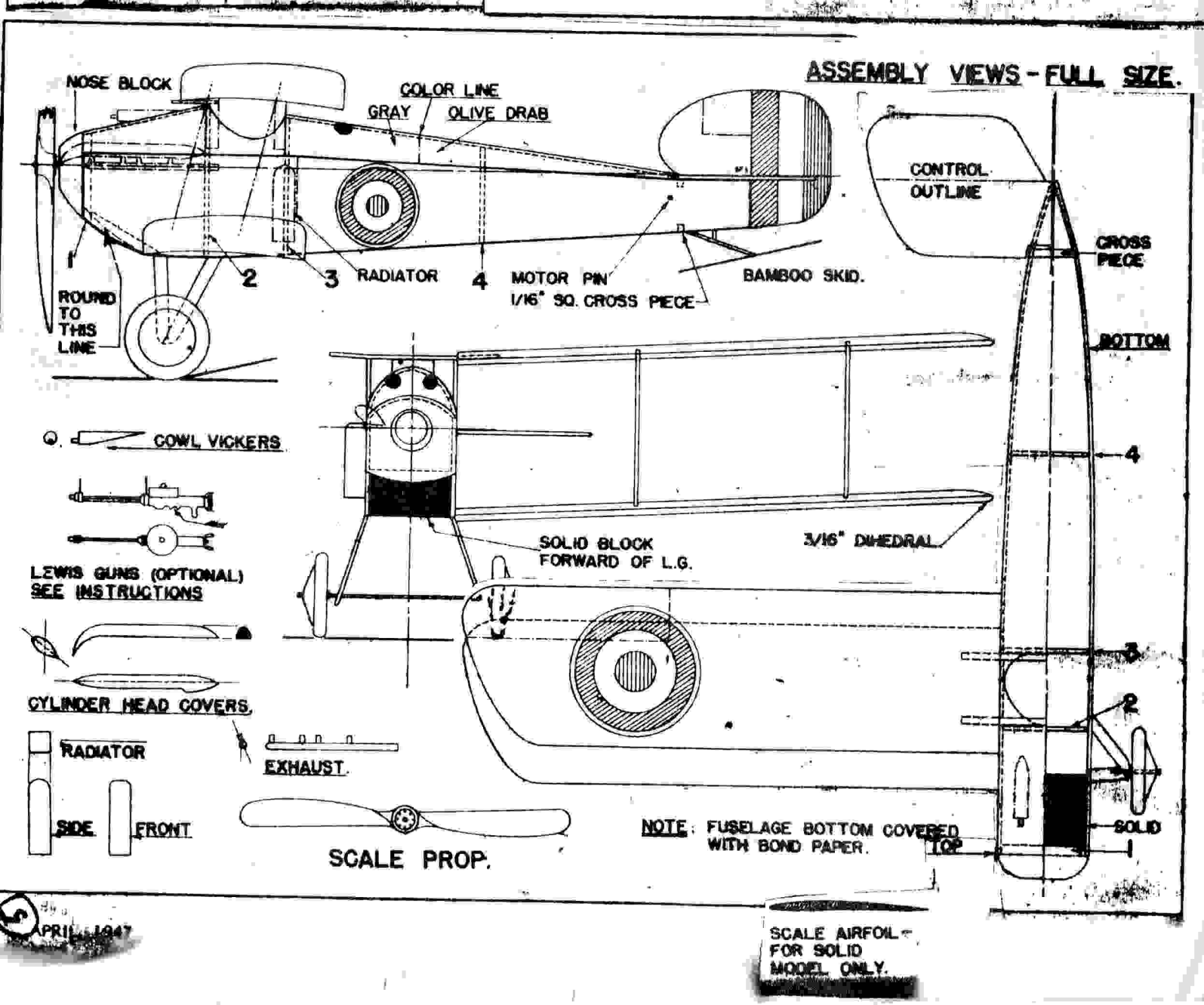
Carve the twin Vickers, the cylinder head streamline covers, exhausts, and the radiators from scraps and cement in place. Your skill will count here on this small job; details will make your model catch the eyes of your friends. Attach the bamboo tail skid.

Tail Surfaces: Cut the elevators and rudder from more of your 1/32 inch sheet which has first been sanded smooth. Cement the elevators in place; take care to align them exactly. The rudder may now be cemented in place. No offset is used on the latter, so align it perfectly straight.

Wings: Because both wings are of equal span and chord, cut sufficient 1/32 inch sheet for them and sand with fine sandpaper until the sheet is approximately 1/40 inch. Balance is extremely important on such a small model, so be sure that the wing material is of uni-

CONTINUED ON PAGE 7.

ASSEMBLY VIEWS - FULL SIZE.



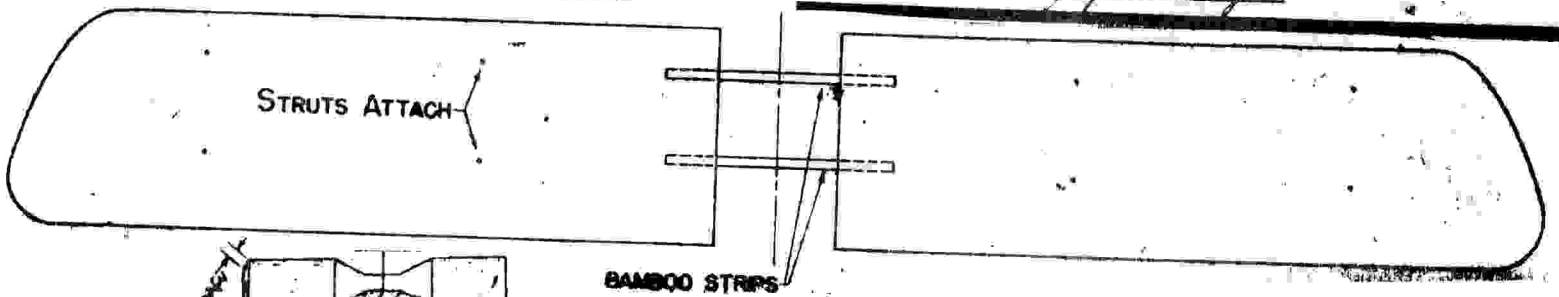
APRIL 1947

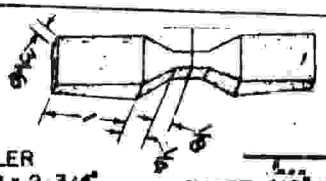
(5)

SOPWITH 5F.1 "DOLPHIN", 1918.

AIR TRAILS AND SCIENCE FRONTIERS
APRIL 1947

MINIATURE 1/4" TO 1 FOOT FLYING MODEL BY
Joseph B. Wilkesy

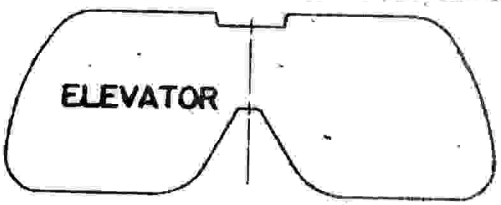


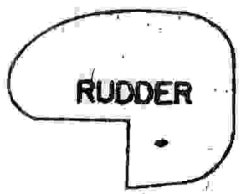


FLYING PROPELLER
BLANK 5/16 × 5/8 × 2-3/4".

SHAFT .010" WIRE.

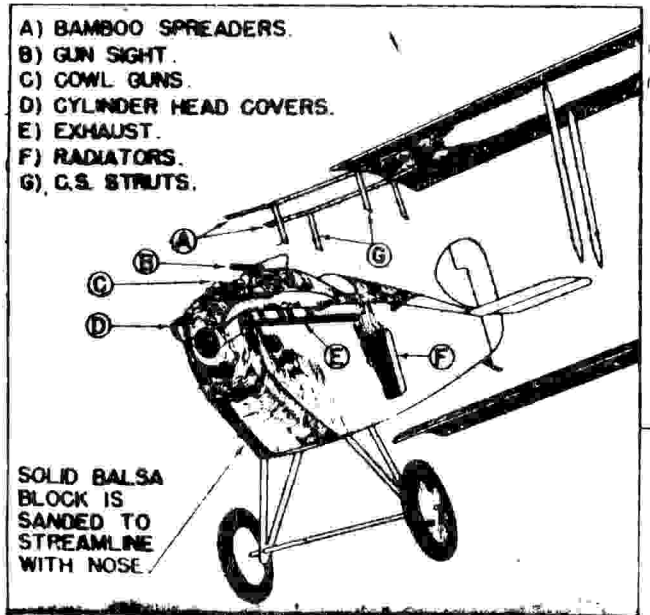
FLYING SURFACES: 1/32" SHEET
SANDED TO APPROX. 1/40".





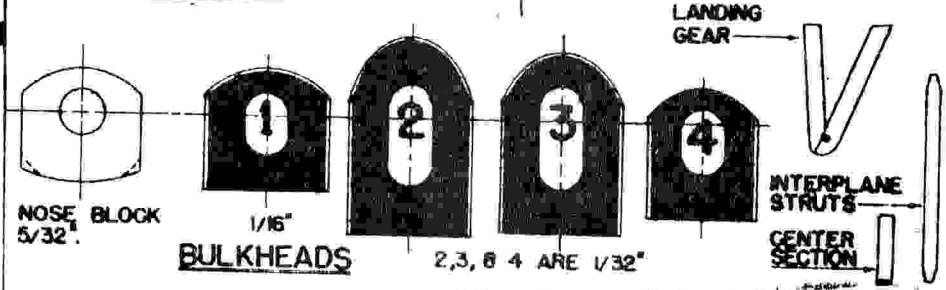


A) BAMBOO SPREADERS.
B) GUN SIGHT.
C) COWL GUNS.
D) CYLINDER HEAD COVERS.
E) EXHAUST.
F) RADIATORS.
G) C.S. STRUTS.



SOLID BALSA BLOCK IS SANDED TO STREAMLINE WITH NOSE.

SIDE – MAKE TWO OF 1/32" SHEET



NOSE BLOCK 5/32".

1/16"

BULKHEADS

2, 3, & 4 ARE 1/32"

form thickness. Cut out four wing panels and steam them to the camber as indicated; once again work for uniform thickness. Cut out four wing panels and steam them to the camber as indicated; once again work for uniformity. Mark the points where the interplane struts attach with a sharp but soft pencil. Block the fuselage into position and cement the lower wing halves in place. The leading edges are raised to just a shade under 1/16 inch; this gives about 2 degrees positive incidence. The tips are raised 3/16 inch for the proper dihedral angle.

Small bamboo strips are used as spreaders on the top wing due to lack of a center section; these are bent over heat so as to provide dihedral for the top wing. Cement these spreaders to the under side of each top wing half; block in position until dry.

For convenience, we'll call the top wing support struts by their usual name on models with a conventional wing—center section struts. Cut them according to the plans from 1/32 inch thick bamboo, strips and cement them in place at each side of the cockpit as shown. Check their alignment and spacing because they will carry the top wing spreaders.

Now the top wing may be mounted. Here again 2 degrees positive incidence is needed. Cut eight interplane struts from 1/32 inch thick bamboo. Note that the strut ends are tapered in First War style. These struts are cemented in place, four to each side, firmly and evenly.

Landing Gear and Flying Propeller: The L. G. struts are cut from 1/32 inch thick bamboo as were the wing struts. They may be fitted together over the plan; drill a 1/32 inch diameter axle hole in each set of struts. They are cemented in place flush against the fuselage bottom. You need have no fear as to their durability if you use a fair amount of good quality model cement. The axle is a straight piece of .020" steel wire. Place it through the struts with a small washer on each side. Cut the wheels from scraps, carve them to shape, and sand them; cement them to the ends of the axle firmly.

If you plan on powering your Dolphin, carve a conventional-type propeller from hard balsa to the size indicated on plans. The blades must be thin and care must be taken in balancing. A coat of clear dope will add strength. The shaft of .010 steel wire is placed through a 1/16 inch diameter hole drilled in the nose block. Because of our model's smallness, we omit the usual nose plug. Likewise, we do not cement the shaft in the propeller hub at this time. Instead, with a pair of tweezers, place the shaft through the nose from the inside of fuselage. A small brass washer cemented in place on the outside of the nose block will act as bearing. A small glass bead on the shaft plus a bearing washer on the back side of the propeller hub, and we're ready to place the shaft in the hub. Bend the end of the shaft in the usual manner, but *do not* cement the shaft to the prop. Removal of the flying prop is facilitated if no cement is used on shaft. Power is two loops of the fine rubber from the center of a golf ball. If none of this is available, use varying amounts of 1/32 inch flat. Secure at rear with 1/16 inch bamboo pin.

If you intend to color dope your Dolphin and use as a glider, you'll need a scale propeller. Carve one from pine or other hard wood. Note that the pitch is opposite to American types. The old 'Hisso' had *clockwise* rotation. A pin is used as shaft for scale prop.

Details: If you want your model to function as a glider you may color dope it. The nose and fuselage top back of cockpit to color line (see side view) are *light gray* as are all bottom surfaces. The remaining portions of the fuselage, the rudder, and top-sides of flying surfaces are *olive drab*. The struts remain natural wood color as does the propeller; tires, exhaust, cylinder head covers, radiators, guns, tail skid, etc., are black. Flying and landing wires have been omitted because of the extra weight.

The Lewis guns add an interesting and unusual bit of detail. However, these are optional. If used, they are carved from scraps, doped black, and are mounted on the front, top wing spreader. Note the small feathered arrow pointing to a notch in the side view of the Lewis gun on plan. This notch is the point for attaching the gun. They are placed one to each side of the spreader at the wing roots. Some Dolphin pilots carried only one Lewis, some both, and some none, so we leave this up to you.

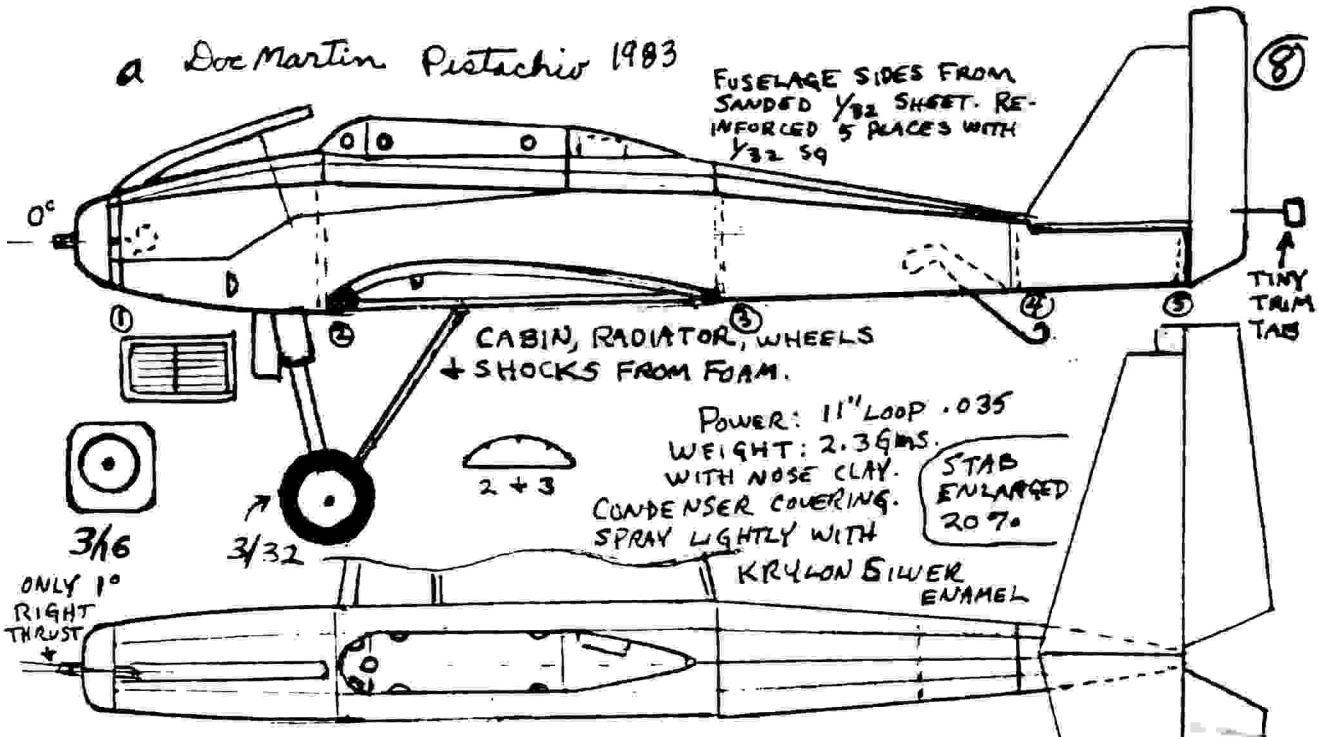
If you power your model, take great care to balance it correctly. Make two stacks of books of equal height on your work bench; stick an ordinary straight pin in each stack and space so as to allow your model to balance by the top wing tips on the pins. Small bits of modeling clay placed in the nose carefully will add weight if needed. The model should balance, when so suspended, 1/3 of the chord back from the leading edge.

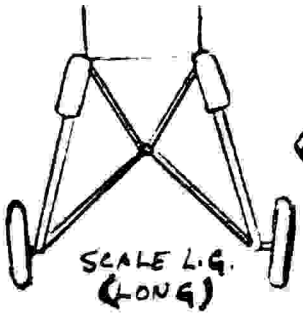
Now for the fun, and there's plenty of it with these models: test by gliding as you would a large flying scale. Then hand-launch with about 25 turns. Work for exact balance, then wind to capacity and let 'er fly. With a little skill you can make your midget make several circles in your living room. The author has had these jobs R.O.G., but this takes a very lightweight model. Doped and decorated with insignia, they will make excellent stunt flights when thrown in the air. You're on your own with this. Good Luck.



● Complete in almost every detail, the SF.1 will enhance any fine collection.

a Doc Martin Pistachio 1983



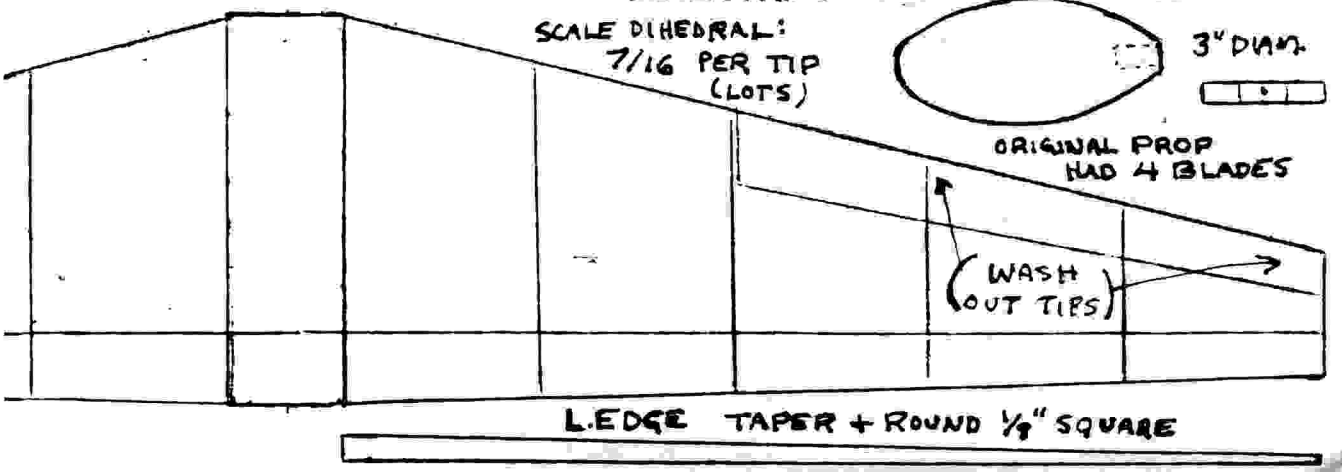


1928 JUNKERS JU49

FLYS TO RIGHT

STRATOPLANE 800 H.P.
REACHED 42,650 FT. IN 1935
PISTACHIO SCALE (6" O.A.L.) BY
REF. AIR ENTHUSIAST
PRESSURIZED CABIN SEPT. 1971 J.B. Martin
COLOR: ALL CORRUGATED SILVER, BLACK TRIM

STAB + FIN 1/32 SQ.



⑨ MIAMA ANNUAL POINTS

This list is just the total annual points for five meets. It does not show the leaders in the various catagories, nor does it reflect on how well you are doing. We only count the best 5 meets of the 8.

Next issue we will give you a breakdown on the various classes, and how you are doing. If those listed have been to five meets, they can improve their scores, but only slightly. If you haven't been to five meets, you can improve a lot!!

1982/1983 SEASON :

1.MIKE ARAK	56
2.JOHN MARTIN	54
3.DAVE KIEFER	48
4.Walt EVERSON	40
5.BILL HISCOCK	34
6.MILIARD WELLS	24
7.CARL HEDLEY	20
8.JIM STEWART	7
9.DON BAL	6
10.DICK KELSO	6
11.EARL PRESSETT	3
12.ED SHAW	3
13.DAVE LINSTRUM	2.
JUNIOR/SENIOR:	
1.SUE ARAK	11
2.HEATHER ARAK	6
3.DAVID BAL	5
4.STEVEN BAL	2

BUILD A PISTACHIO FOR THE FLY IN ON MARCH 27 IN THE KEYS

AFTER 5 MEETS:

★ H.P. HAS MOVED!

NEXT MEET: THIS SUNDAY MAR 13: 9-5 MIAMI/DADE SOUTH!

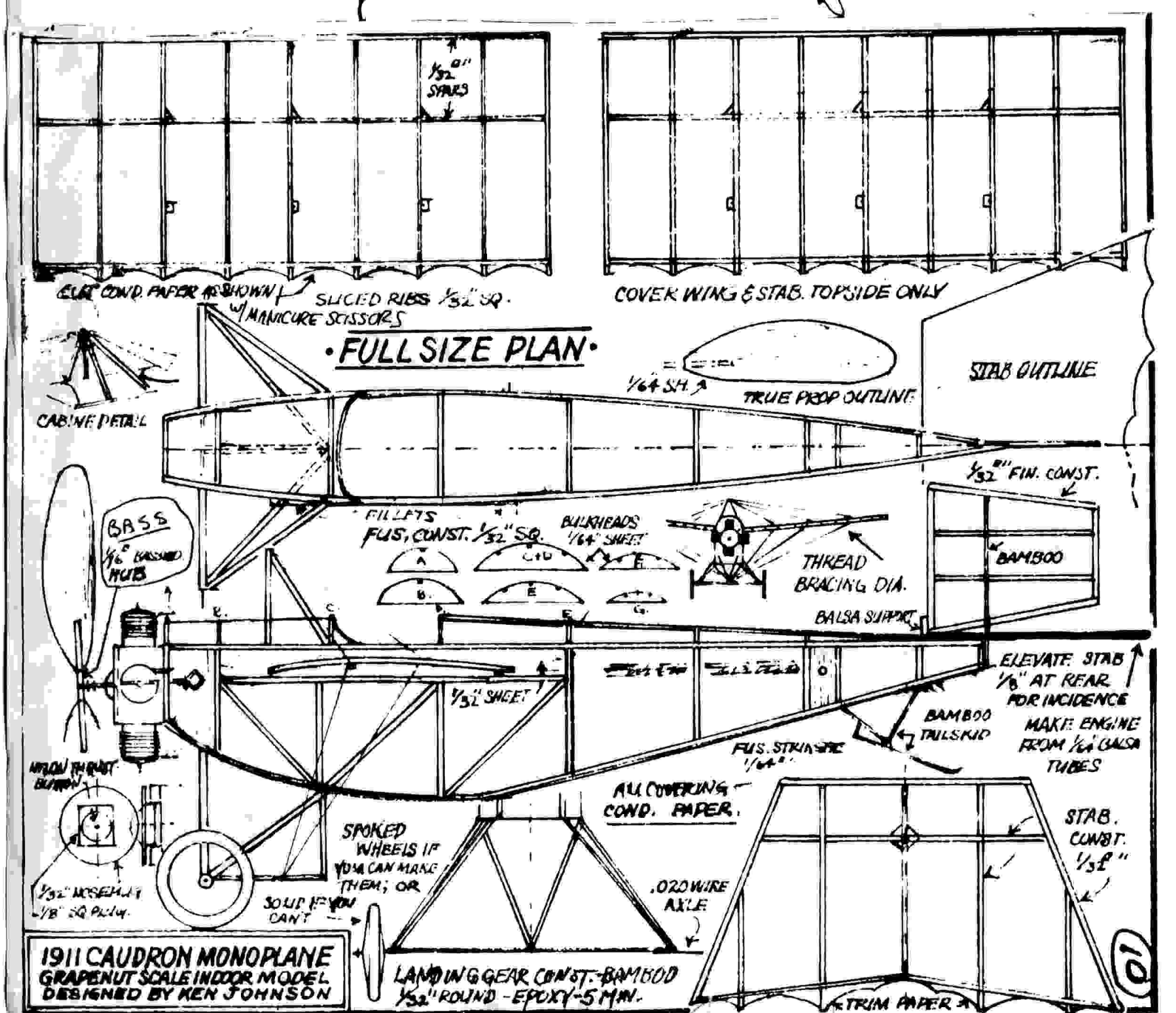
NEXT FLY-IN MAR 27 - CORAL SHORES SCHOOL - MIKE MARK 90

THE HANGAR PILOT



Is published 8 (Or 9) times a season by Miami Indoor Aircraft Model Association (MIAMA) AMA Club 986, the only active all indoor club publication in the AMA. For $10.00 a year you receive all 8 additions, and for an additional $10.00 you are a member of this famous, far out, club. (Indoor isn't for everyone.!) We solicit your contributions, plans, comments, contributions, funds, 3-views, articles, gripes. We particularly want to hear from those who have not seen their particular interest in print..... Fly powered mike jobs, paper gliders, etc. LET'S HEAR FROM YOU!!!! Dr. John Martin 2180 Tigertail Ave, Coconut Grove Florida, USA 305-858-6363 → AMA CD 712

★ NOTE NEW ADDRESS FOR HANGAR PILOT!


1/32" SPARS
SLICED RIBS 1/32" SQ.
COVER WING & STAB. TOPSIDE ONLY
FULL SIZE PLAN
CABINE DETAIL
1/64 SH.
TRUE PROP OUTLINE
STAB OUTLINE
1/32" FIN. CONST.
BAMBOO
FILLETS
FUS. CONST. 1/32" SQ.
BULKHEADS 1/64" SHEET
THREAD BRACING DIA.
BALSA SUPPORT
BASS
1/16" BASSWOOD HUBS
1/32" SHEET
ELEVATE STAB 1/8" AT REAR FOR INCIDENCE
BAMBOO TAILSKID
FUS. STRINGER 1/64"
MAKE ENGINE FROM 1/4" BALSA TUBES
ALL COVERING — COND. PAPER.
SPOKED WHEELS IF YOU CAN MAKE THEM; OR
SOLID IF YOU CAN'T
.020 WIRE AXLE
STAB. CONST. 1/32"
TRIM PAPER
1911 CAUDRON MONOPLANE
GRAPENUT SCALE INDOOR MODEL
DESIGNED BY KEN JOHNSON
LANDING GEAR CONST.-BAMBOO 1/32" ROUND - EPOXY - 5 MIN.



"I own a Beta Max, a Hasselblad, a Mercedes Benz, and a half of a Beechcraft Bonanza, and none are as much fun as this."

NEXT MIAMA

INDOOR MEET

#6: SUN MARCH 13 MIAMI DADE S. COLLEGE

9 TO 5 THIS SUN!

FLA STATE MODEL CHAMPIONSHIP
JAXONVILLE APRIL 9+10
CD FRED WARMING 6140 RIVIERA MANOR DR

APRIL 24 MIAMA MEET 7
MIAMI DADE SOUTH COLLEGE

MAY 22 - LAST MIAMA MEET

MAY 28-29 - REBEL RALLY
JAX. CD JOE MEAD 1334 RENSSELEAR AV
JAX. FLA. 32205

INDOOR WEEK JUNE 12 - 18

THE LATEST INDOOR NEWS INSIDE

THE HANGAR PILOT

EDITOR: DR. JOHN B. MARTIN MIAMA
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← NEW ADDRESS!

MARCH 27
FLY-IN: MILE
MARKER 90.
PISTACHIO EVENT
9AM - ?

TO:

1ST CLASS
NOT JUNQUE MAIL