THE HANGAR PILOT

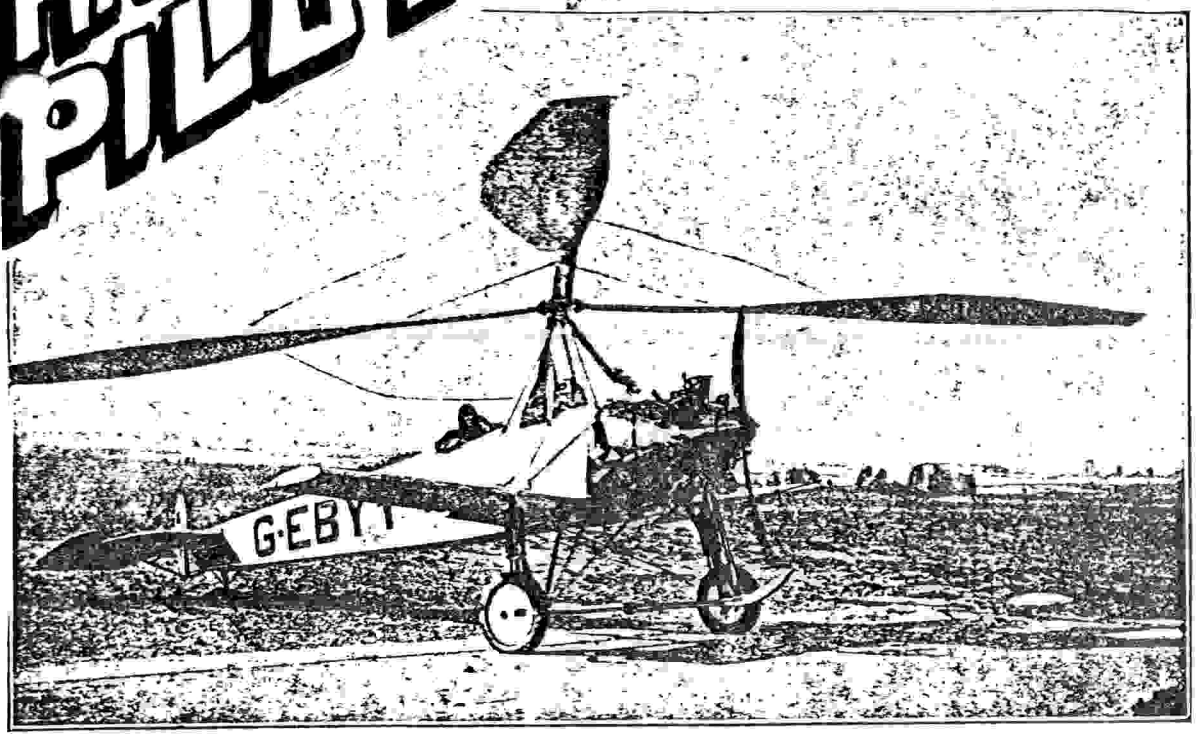
ONE AND ONLY!

THE MIAMI INDOOR AIRCRAFT MODEL ASSOC. MIAMA

ISSUE 83
JAN. 83

AMA CLUB 986 "E"

AUTOGIRO ISSUE
A COLLECTOR'S ITEM !



L'Autogire La Cierva, type C.8-II, atterrit au Bourget après sa traversée de la Manche. 1928

MERRY CHRISTMAS

FROM MIAMA !

NEXT MEET - JAN 16 '83

(1)



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 will receive all 8 editions, and an additional $10.00 makes you a member of MIAMA (Indoor isn't for everyone!) Send contributions, letters, plans, 3-views, articles, gripes, and MONEY to: MIAMA Dr. John Martin 3327 Darwin St. Miami, Fla. 33133

MIAMA RECORD TRIALS 11/20/82



Record Trials are fun too. Unlimited flights. If you stall on launch, no sweat, just refly it. Low pressure.

The meet at the Virrick Boxing Gym on Nov. 20 produced four new records by MIAMA members in the new Cat I (26'3").

Heather Arak set 2 Junior records. Her kit model SLOW POKE (Gitlow) did 1:16 in H/L stick, and 1:05 in paper stick. Heather builds her own models, and agonizes over every glue joint & wrinkle. Every now and then she gets yelled at by her father..for her own good. Dave Linstrum flew his Cesar Banks design Penny Plane 3:40, and Mike Arak flew his little "A" ROG 4:02. Congratulations!! Millard Wells autogiro did 1:48, and Doc's helicopter did 1:32. The 'copter was built from 1930 plans and the original held the, then, WORLD record- 1:29! Everson's ROG did 3:18. Don Bal and new member Bill Ervin flew in glider and E&B.

All flights flirted with the girders and luck was a big factor in all the best flights...one of the joys of Cat I flying. We'll try this type of meet again soon. Are you guys looking for new SITES ?

OH BOY, THE GINSENG COCKTAILS.

BELGIAN PROXY PEANUT CONTEST

Bill Hannan has informed us about this international meet that attracted 58 entries from 5 countries in 1982. The 1983 meet will be Aug. 20/21. For details write:

F.L. VAN HAUWAERT Grand Place, 1/52 4110 FLEMALLE-HAUTE Belgium

Also we remind you of the MIAMA 4TH WORLD PEANUT GRAN PRIX June 17/18 For applications write to Mike Arak 10900 SW 61 Ct. Miami, Fla.USA

FUTURE PILOTS:



(2)

Future issues, like this one, will feature some indoor speciality or other. We would like to have an issue on YOUR special interest. We plan an ornithopter issue, plus helicopter, Rise Off Water, Baby HOG, Trimming, etc. Also ultralite peanut, and multimotorissues.

We note that there has been quite a bit of information available on FAI, and Penny, and EZB, but almost nothing on the rest. ZAIC we ain't but if this issue is any example, we can be of some help, but we need YOUR HELP. Here's the pitch: THERE IS NO ONE IN THE WORLD who has more knowledge about some of the above mentioned specialities than the guys receiving this Hangar Pilot (About 200).(Yes, YOU!).

Here's your chance to promote your interests...Your name in lights!, the fast life, Champagne! Let's show the world the joys of a fly-powered model etc. Ken Johnson is filming a sequence for BELIEVE IT OR NOT with Jack Palance with his model of Whiteside's pre-Wright Bros. flyer. We holding out for a Grapenut sequence with Raquel Welsh. Are we dull tools? NO, I say! It's just that it isn't for everyone. Hey. Ken, let's have some good basic ornothopter poop for Erbach's contest.

So, pilots, let's get on the typewriter and, even though you know you may not know much about these obscure subjects, it is probably more than anyone else knows. Write an article, draw some 3-views,even a photo or two, and help your fellow indoor modeler know the joys you are experiencing. I'm really weary of reading contest results, cake sales, demo teams, in the average R/C bulletin...BORING! We need good Grapenut stuff, ultralite scale,and we are open to any and all of your suggestions..Let's get out of the RUT!

Of course, one of the problems of all this is that you end up with too many events, but these interests need not be official...perhaps a once a year special event. We had a guy in MIAMA who hung around for 2 years, and his ONLY interest was paper gliders! Unfortunately he drifted away because of no comrads, and is probably flying his paper gliders in some solitary cell. Let's not repeat this tragedy..there is room for all.

We would like a KID STUFF issue on easily constructed good flyers so let's hear from Carter, Whitten, VanGorder, Clark, Markos etc. Hep, Hut. A multi-engined issue..Hungerford, WELLS, Martin, McGillvaray. AIR-BRUSH and detailing...Hadland, Arak, Kiefer? Does anyone know anything?

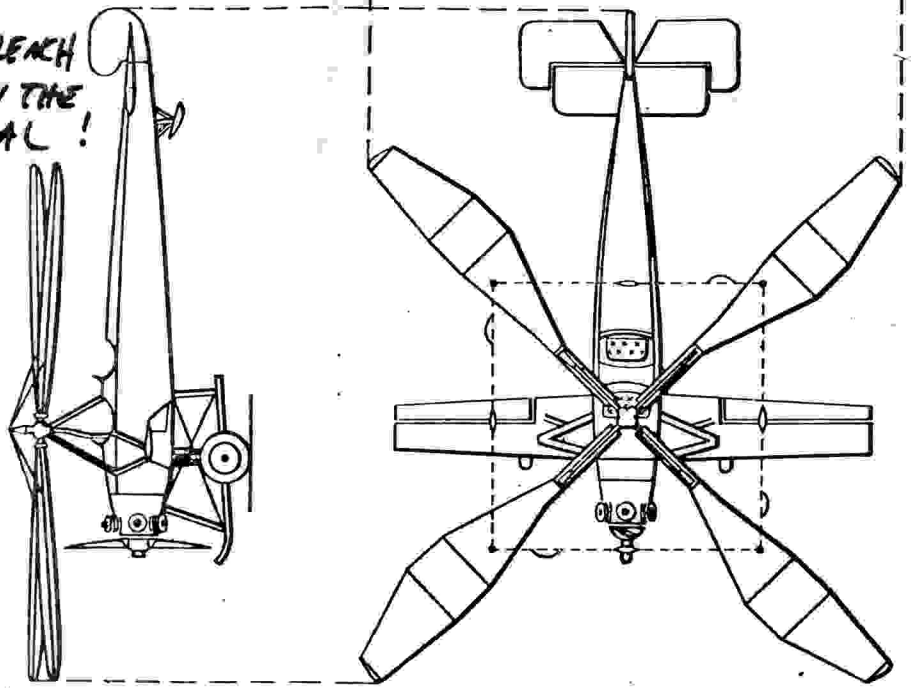
Pass the word, and when you write the article please make your contribution fit the pages of the H.P., and use the smallest type you can.

LEFT OUT OF THIS ISSUE DUE TO TOO MANY AUTOGIROS & LACK OF SPACE: HORSES ORIFICES, MEET RESULTS #IV, AND YOUR ARTICLE. SEE ISSUE 84

FICHE N° 17. FROM "L'AERONAUTIQUE" Supplément au N° 113. Octobre 1928.

AUTOGIRE LA CIERVA type C. 8-II

OUR COVER MODEL



NOTE THE WAY THE FRENCH MEASURE "SPAN" - ON THE BOX - NOT THE DIAGONAL!

DÉSIGNATION

La Cierva C. 8-II.

Disposition de la voilure : voilure autorotative à 4 pales. Petit plan inférieur portant les ailerons. Moteur *Armstrong-Siddeley-"Lynx"* 200 HP. Hélice tractive.

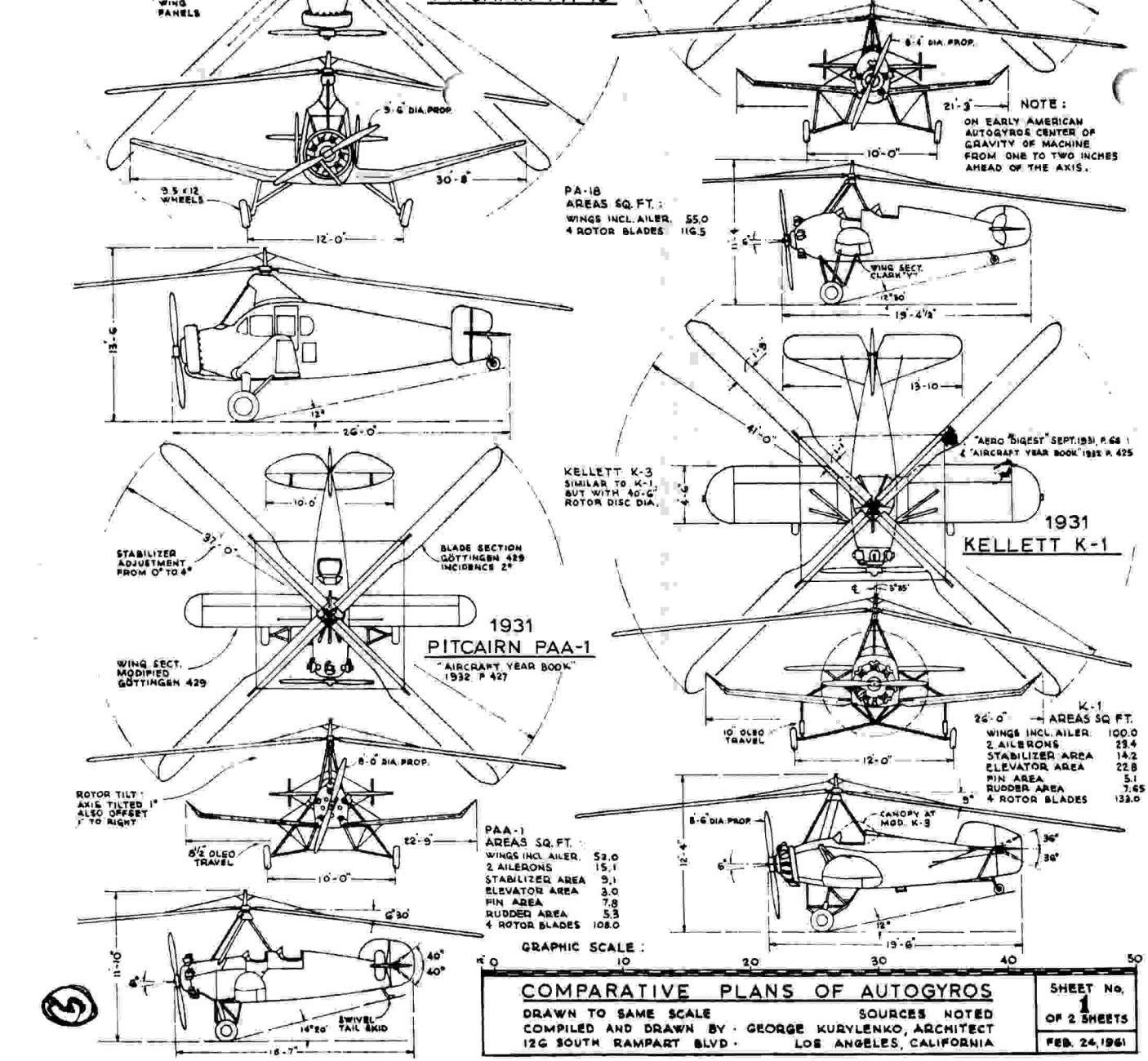
DIMENSIONS

Envergure minimum (pour 12 mètres de diamètre du rotor)	8m,80
Longueur	11m
Hauteur	4m,5

(3)

The rotor is the most critical part of the whole ship, but it is not complex, just a matter of constant trimming and patience and guesswork. You have as many as six or seven options just to achieve one result - for example, the rotor mast (on a stick model) may be moved fore and aft, the shaft may be tilted fore and aft or to one side, the propeller may have more or less downthrust, or sidethrust, the trim tabs on the vertical stabilizer act as ailerons, and one may be more down than the other (we've never had to use up elevator), the propeller may be changed to a different size to affect turn, turn may be achieved by another size propeller, adding area to a propeller (as on the profile Avian I sent in), the rotor shaft may be tilted to one side, the angle of the rotor blades may be changed....and so on, ad infinitum! It's a matter of just observing what the craft does on launch, and then deciding to make <u>one</u> slight change in something which will have some good effects and affect the whole flight pattern the least, and making one change and one flight, until you can get the same flight pattern each time. It's achieving stability, which then leads to predictability and consistency. I have that with the two Bostonians, but they are simply demonstration models, to show that model autogiros WILL fly stably, and <u>without wings</u>, and in this way encourage others to try it. Our next article will have more specific information, most on the construction of the rotor system, some of teh restrictions, such as trying to make a scale model of the Pitcairn PCA-2 which has a very short fuselage and tremendously long thin blades. And, we use flat plates for blades, they are self-stabilizing, airfoils don't work, at least not on these little jobs. We do not quite buy the classic drawing of the resultant pulling a blade thru the air - maybe at 90 degrees from the fuselage on the advancing blade but what happens to the airflow as the blade passes over the top of the engine, as it retreats on the other side, and ends up over the tail? We've got some opinions, but open to ANYTHING anybody with the equipment and scientific approach can add, or detract, all we know is that what we're using works pretty well, sometimes very well, and not at all at other times! We're not theorists and won't get into that aspect of it, nor try to stir up controversy. we just wanna get guys to try giros, and with our rotor system, they'll have a good start, at least the giros won't go crashing EVERY time they're launched, and we also believe that the light rubber jobs are the best way to go at the beginning, fewer things to go wrong, and fewer blades busted.

AUTOGIRO TRIM SUGGESTIONS - WARRENSHIPP: HIS AND BILL HAMANN'S FINDINGS: (4)



COMPARATIVE PLANS OF AUTOGYROS

DRAWN TO SAME SCALE — SOURCES NOTED

COMPILED AND DRAWN BY · GEORGE KURYLENKO, ARCHITECT

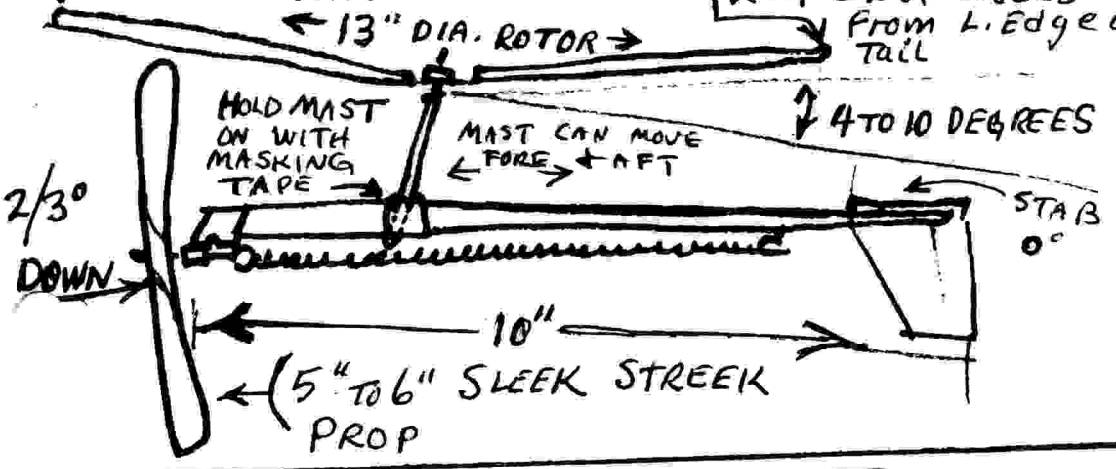
126 SOUTH RAMPART BLVD · LOS ANGELES, CALIFORNIA

SHEET No. 1 OF 2 SHEETS

FEB. 24, 1961

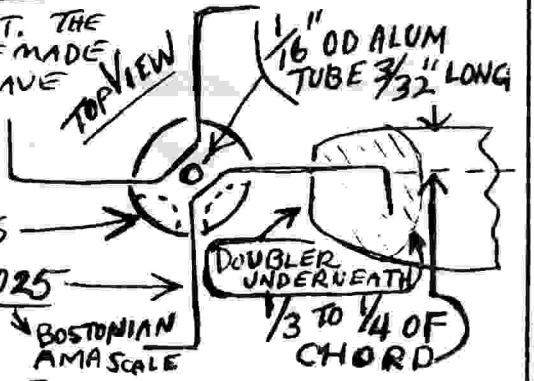
BUILD A SHIPP STICK GIRO TRAINER (6)

DON'T TRY ANYTHING (NOT A SCALE MODEL) UNTIL YOU TRAIN ON THIS:



HUBS:

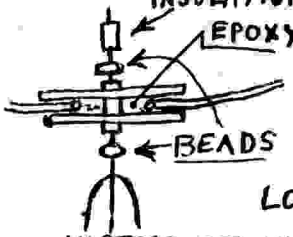
MAKE WOOD ONES FIRST. THE SOLDERED ONES CAN BE MADE LIGHT, BUT YOU MAY HAVE SOLDER FAILURE



TWO DISCS OF 1/64" Sig Mahogany PLYWOOD. FILE OUT FOR LIGHTNESS

FLEX WIRE .016, .020, .025

P-NUT GRAPENUT — BOSTONIAN AMA SCALE



ABOUT 5° CONING ANGLE (BACK TILT) ALSO SOME LEFT TILT TO COUNTER TORQUE.

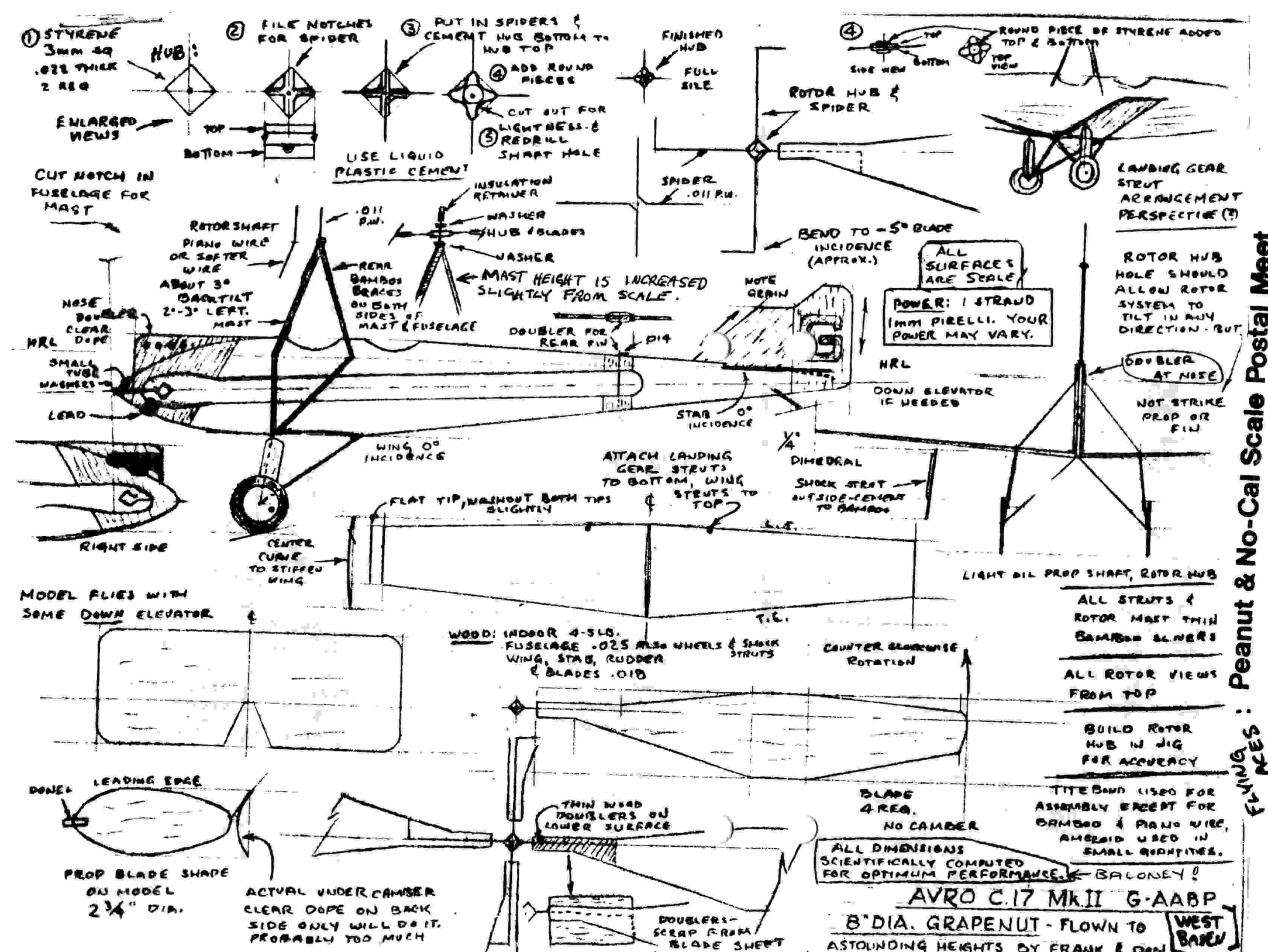
4° NEGATIVE BLADE PITCH.

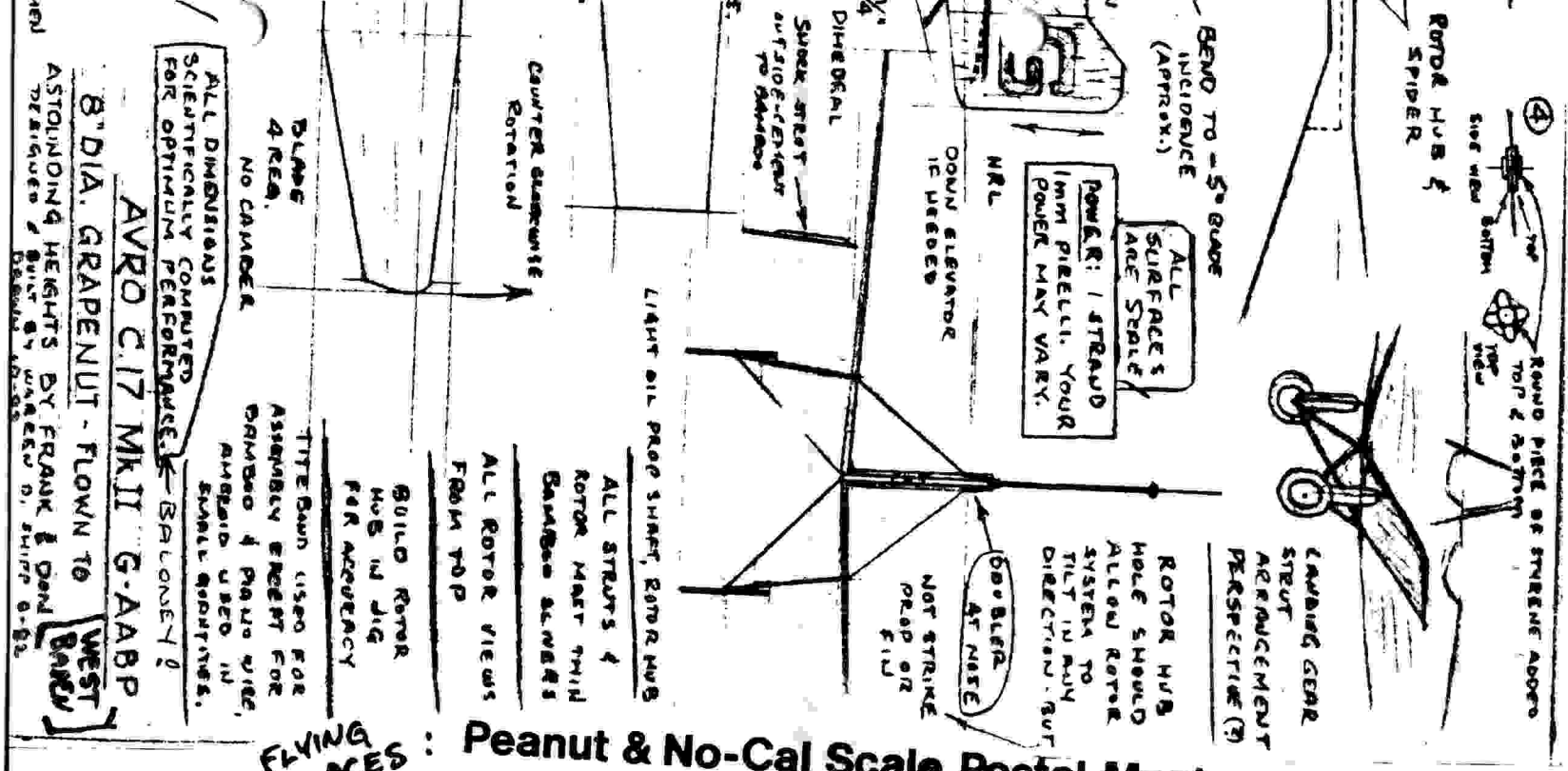
O.D. TUBE SHOULD FIT VERY LOOSE. HUB SHOULD FLEX AND "SLOP"

INSTEAD OF WOOD, DISCS CAN BE BRASS OR BRONZE W/SOLDERED WIRE.

BLADES:

MAKE JIG TO MOUNT BLADES ACCURATELY. 1/16" SHEET - ALL FROM SAME STOCK / GRAIN / ETC. TO PROVIDE UNIFORM FLEX. NO CAMBER OR AIRFOIL. CHECK BLADE ANGLE & STATIC BALANCE. EXPECT WOBBLE.

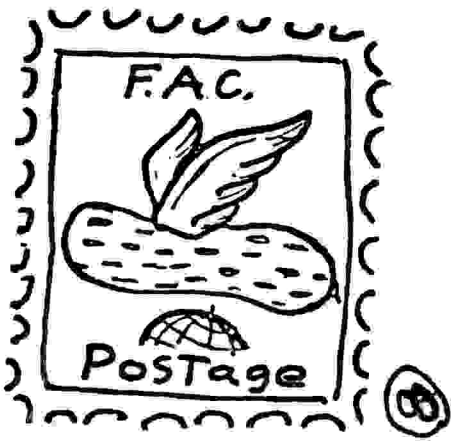

① STYRENE 3mm sq .022 THICK 2 REQ
HUB:
ENLARGED VIEWS
TOP
BOTTOM
② FILE NOTCHES FOR SPIDER
③ PUT IN SPIDERS & CEMENT HUB BOTTOM TO HUB TOP
④ ADD ROUND PIECES
⑤ CUT OUT FOR LIGHTNESS & REDRILL SHAFT HOLE
USE LIQUID PLASTIC CEMENT
FINISHED HUB
FULL SIZE
SPIDER .011 P.W.
④
TOP
SIDE VIEW
BOTTOM
ROUND PIECE OF STYRENE ADDED TOP & BOTTOM
TOP VIEW
ROTOR HUB & SPIDER
LANDING GEAR STRUT ARRANGEMENT PERSPECTIVE (?)
CUT NOTCH IN FUSELAGE FOR MAST
INSULATION RETAINER
WASHER
HUB & BLADES
WASHER
.011 P.W.
ROTOR SHAFT PIANO WIRE OR SOFTER WIRE
REAR BAMBOO BRACES ON BOTH SIDES OF MAST & FUSELAGE
MAST HEIGHT IS INCREASED SLIGHTLY FROM SCALE.
BEND TO -5° BLADE INCIDENCE (APPROX.)
ALL SURFACES ARE SCALE
POWER: 1 STRAND 1mm PIRELLI. YOUR POWER MAY VARY.
ROTOR HUB HOLE SHOULD ALLOW ROTOR SYSTEM TO TILT IN ANY DIRECTION - BUT
ABOUT 3° BACKTILT
2°-3° LEFT.
MAST
NOSE DOUBLER
CLEAR DOPE
HRL
SMALL TUBE WASHERS
LEAD
NOTE GRAIN
DOUBLER FOR REAR PIN
PIN
HRL
DOWN ELEVATOR IF NEEDED
STAB 0° INCIDENCE
WING 0° INCIDENCE
DOUBLER AT NOSE
NOT STRIKE PROP OR FIN
RIGHT SIDE
CENTER CURVE TO STIFFEN WING
ATTACH LANDING GEAR STRUTS TO BOTTOM, WING STRUTS TO TOP
FLAT TIP, WASHOUT BOTH TIPS SLIGHTLY
¼° DIHEDRAL
SHOCK STRAT OUTSIDE-CEMENT TO BAMBOO
L.E.
T.E.
LIGHT OIL PROP SHAFT, ROTOR HUB
ALL STRUTS & ROTOR MAST THIN BAMBOO SLIVERS
MODEL FLIES WITH SOME DOWN ELEVATOR
WOOD: INDOOR 4-SLB. FUSELAGE .025 Also WHEELS & SHOCK STRUTS WING, STAB, RUDDER & BLADES .018
COUNTER CLOCKWISE ROTATION
ALL ROTOR VIEWS FROM TOP
BUILD ROTOR HUB IN JIG FOR ACCURACY
DOWEL
LEADING EDGE
PROP BLADE SHAPE ON MODEL 2¾" DIA.
ACTUAL UNDERCAMBER CLEAR DOPE ON BACK SIDE ONLY WILL DO IT. PROBABLY TOO MUCH
THIN WOOD DOUBLERS ON LOWER SURFACE
DOUBLERS - SCRAP FROM BLADE SHEET
BLADE 4 REQ. NO CAMBER
TITEBOND USED FOR ASSEMBLY EXCEPT FOR BAMBOO & PIANO WIRE, AMERAID USED IN SMALL QUANTITIES.
ALL DIMENSIONS SCIENTIFICALLY COMPUTED FOR OPTIMUM PERFORMANCE. ← BALONEY!
AVRO C.17 Mk II G-AABP
8" DIA. GRAPENUT - FLOWN TO ASTOUNDING HEIGHTS BY FRANK & DON
WEST BADEN
FLYING SCALE :: Peanut & No-Cal Scale Postal Meet

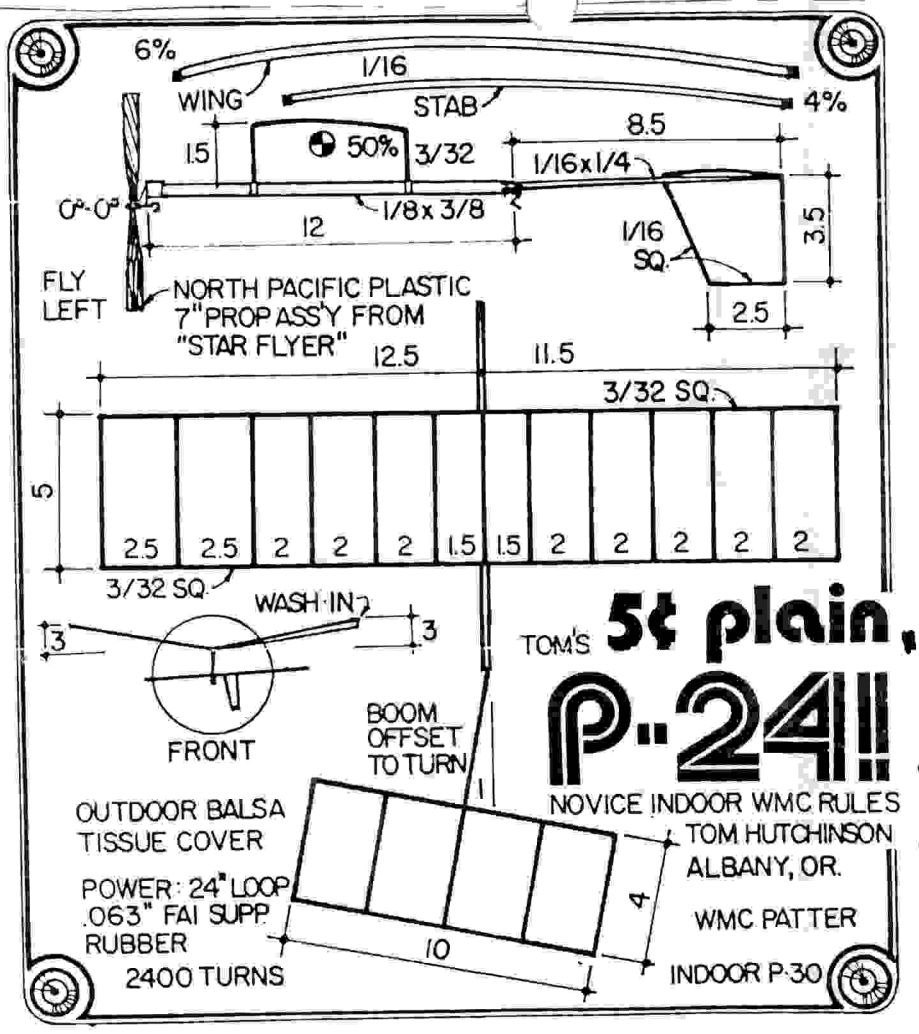


FLYING ACES: Peanut & No-Cal Scale Postal Meet

All right clubsters, time to get those models out of mothballs, the ones that have been gathering dust since the good weather has left us. This years Postal Meet is about to get underway! We will have the usual events, that is, an Indoor Wing and an Outdoor Wing for both Peanut and No-Cal. Just send in your times to GHQ giving you name, rank, Name of your ship time of your flight, and the date of your flight on a postcard or letter. Everytime you better your time send them in also. The contest will run from the time you read this until March 17, 1982. There will be some prizes for the winners of each event.

BUILD--FLY--WIN--EF-AAAA-CEEEE!!







TOM HUTCHINSON (1940-1982) WITH [illegible]

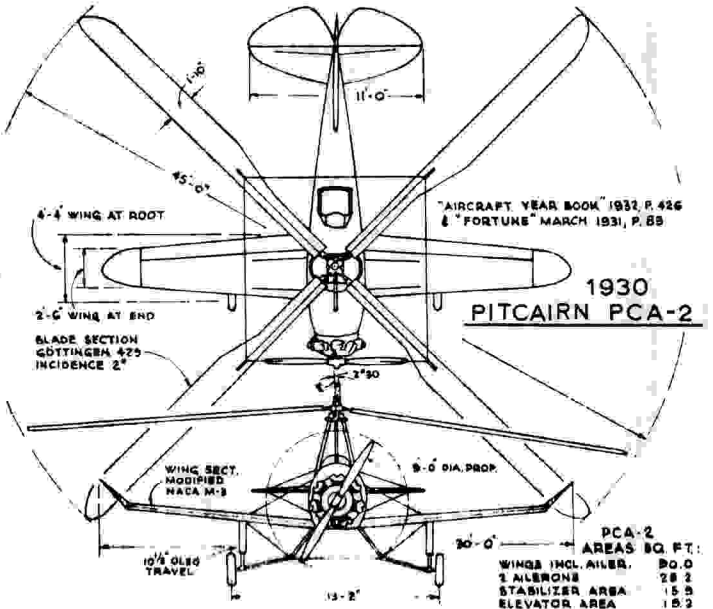
HUTCH" MEMORIAL P-24

SPONSORED BY DAVE LINSTRUM MIAMA

- ONE-DESIGN EVENT, MODEL MUST BE TOM'S "5¢ PLAIN" AS SHOWN AT LEFT.
- TWO CLASSES (NOT AGE, BUT EXPERIENCE)
  1. EXPERT - ANY FLYER WHO HAS EVER WON A 1ST PLACE AT ANY AMA INDOOR MEET IN A RUBBER ENDURANCE EVENT (ANY CLASS)
  2. NOVICE - ALL OTHER FLYERS
- AWARDS: CERTIFICATES & MODEL SUPPLIES KITS

THIS "ONE DESIGN" EVENT WILL BE FLOWN AT MEET 4 ON JAN 16 1983 - MIAMI/DADE SOUTH
A FINE EVENT FOR JUNIORS

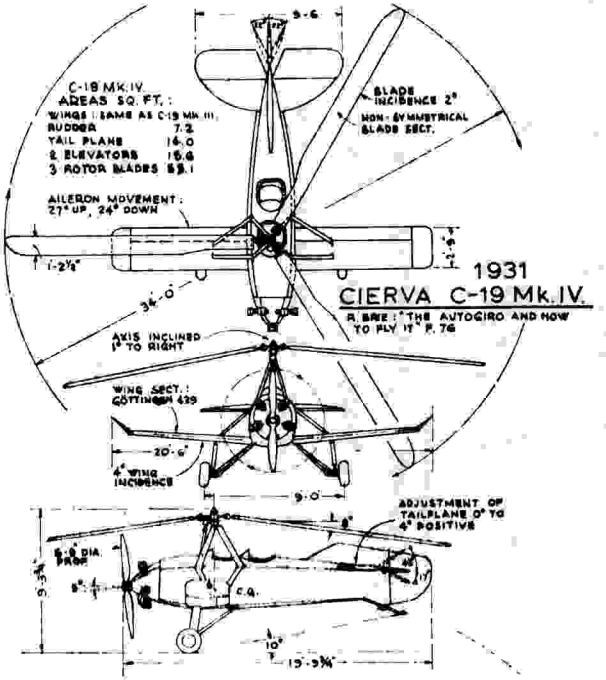
(9) FROM SPORT FLYING - JUNE 1961 (ALSO GIROS IN JULY ISSUE)



1930
PITCAIRN PCA-2

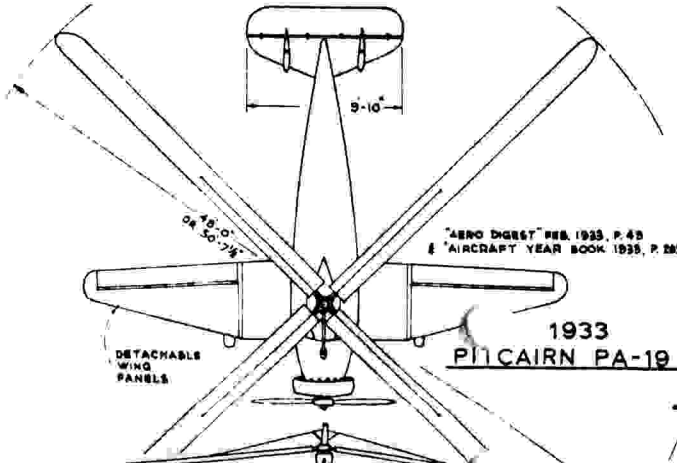
PCA-2 AREAS SQ. FT.:

WINGS INCL. AILER.	310.0
2 AILERONS	28.2
STABILIZER AREA	15.9
ELEVATOR AREA	15.2
FIN AREA	7.75
RUDDER AREA	7.5
4 ROTOR BLADES	137.0

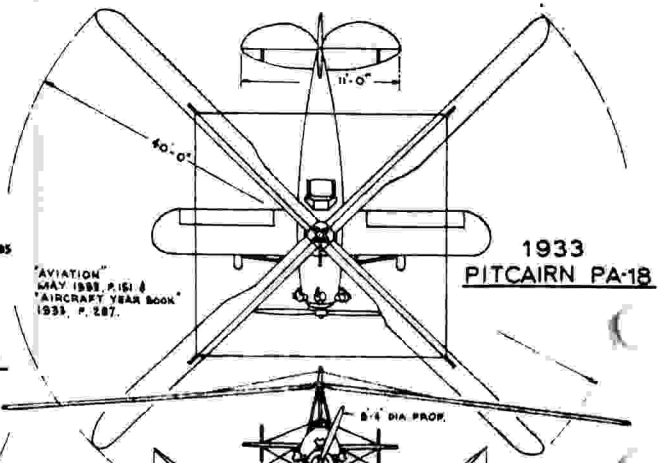


1931
CIERVA C-19 Mk.IV.

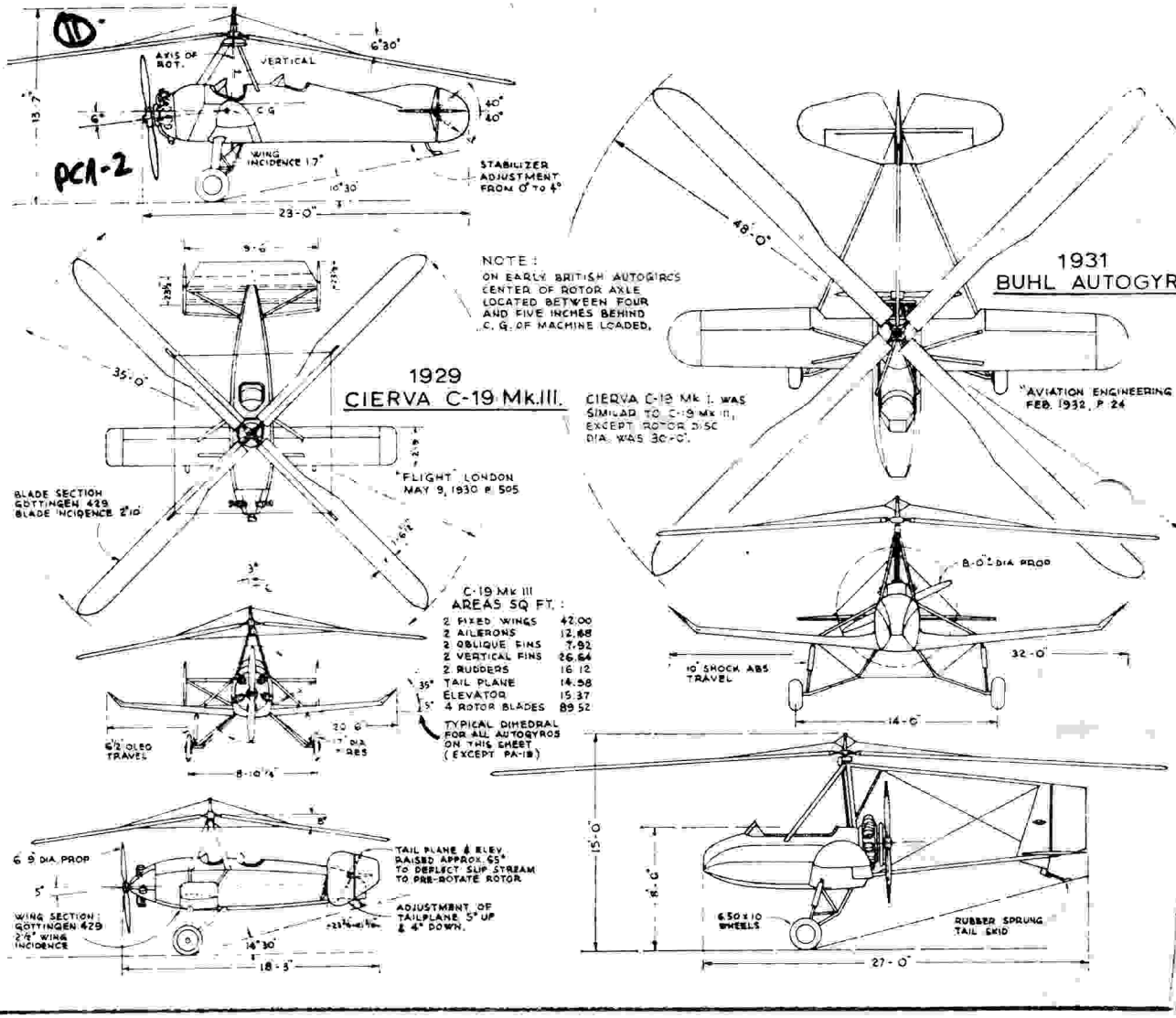
R. BRIE: "THE AUTOGIRO AND HOW TO FLY IT" P. 76



1933
PITCAIRN PA-19



1933
PITCAIRN PA-18



TED KENNEDY WILL NOT RUN FOR PRESIDENT IN 1984. ALSO DOC MARTIN INFORMS DON SHULA HE IS UNAVAILABLE FOR QUARTERBACK OF DOLPHINS NEXT SEASON.

AUTOGIROS AREN'T FOR EVERYONE

REPORTS THAT BUD TENNY IS DEAD ARE GREATLY EXAGERATED



INDOOR MODELS

OUT DOOR MODELS

WALT'S MODEL WORKS

QUANTITY RATES

MODIFIED AMA CUBS - $2.50
MARKS' DOUBLE WHAMMY - $3.95

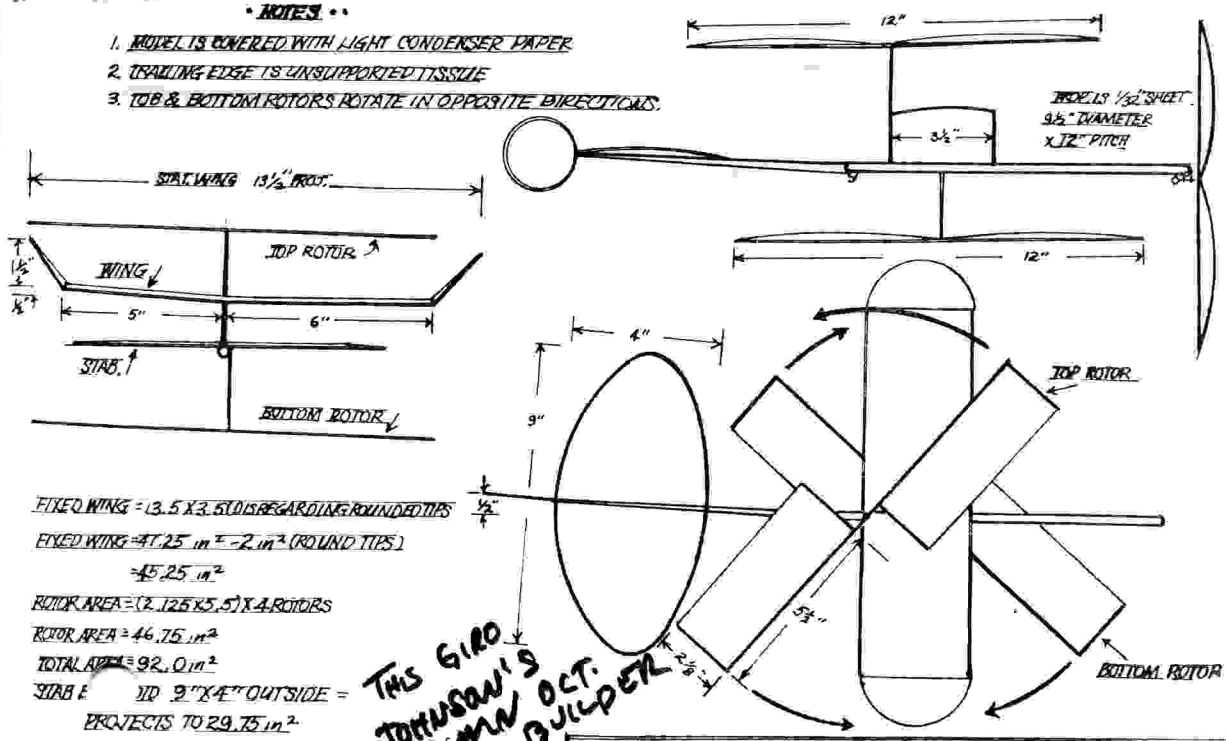
CALL 1-513-922-3351 (JUNIOR MODELS)

WALTER VAN GORDER
5664 VICTORY VIEW LN.
CINCINNATI, OHIO 45238

HANGAR PILOT QUIZ. WHO ARE THEY?
a. Pioneer Aviators
b. Famous Indoor Flyers
c. Inhabitants of Rairford's death row.
d. Used car salesmen
See page 13 for Answer!

NOTES

1. MODEL IS COVERED WITH LIGHT CONDENSER PAPER
2. TRAILING EDGE IS UNSUPPORTED TISSUE
3. TOP & BOTTOM ROTORS ROTATE IN OPPOSITE DIRECTIONS.



FIXED WING = 13.5 X 3.5 (DISREGARDING ROUNDED TIPS)
FIXED WING = 47.25 in² - 2 in² (ROUND TIPS)
= 45.25 in²
ROTOR AREA = (2.125 x 5.5) X 4 ROTORS
ROTOR AREA = 46.75 in²
TOTAL AREA = 92.0 in²
STAB ADD 2" X 4" OUTSIDE = PROJECTS TO 29.75 in².

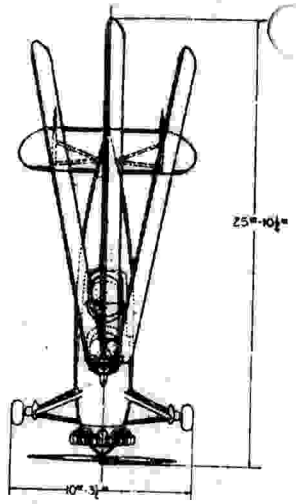
FROM KEN JOHNSON'S INDOOR COLUMN OCT. '82 MODEL BUILDER

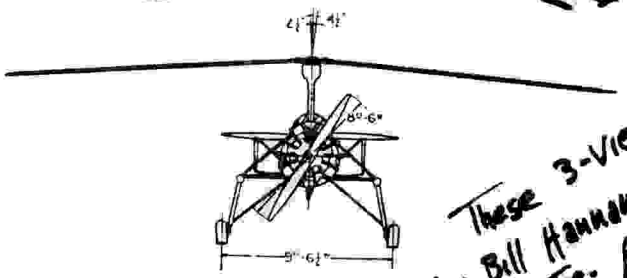
THIS GIRO

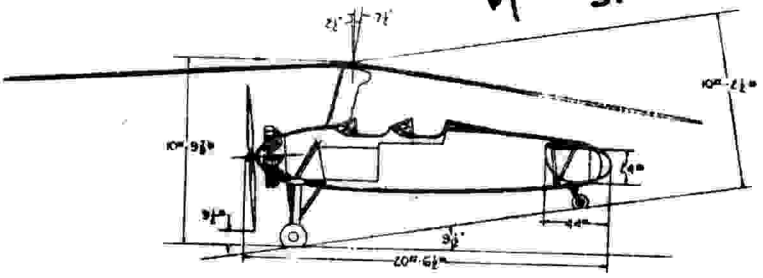
AUTOGIRO NUMBER 35
BY MR. JEAN ANDREWS
AMA 71001

QUIZ ANSWER —
THESE MEN WANT
TO BE YOUR PRESIDENT!
A. MONDALE D. CRANSTON,
B. GLENN E. ASKEW,
C. HART F. UDALL

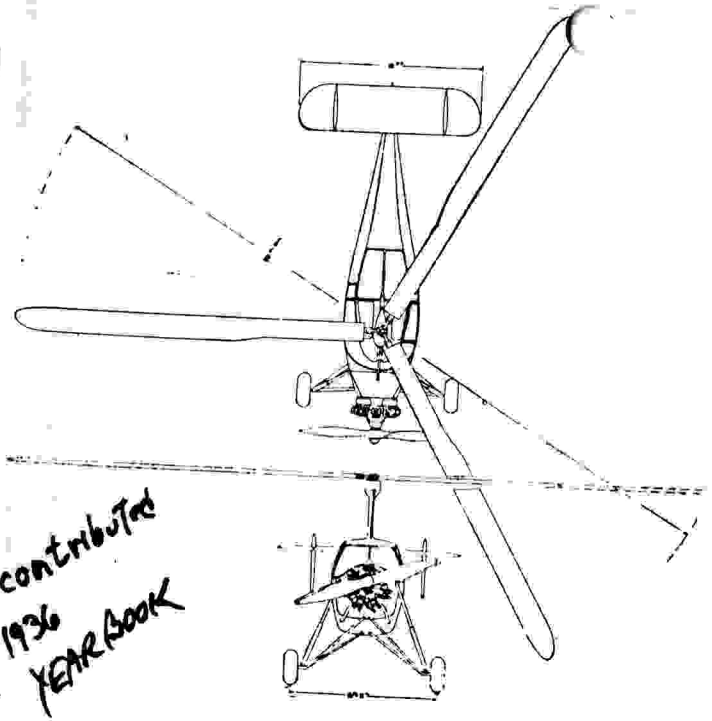
MERRY CHRISTMAS ROMAN
+ GLORIA SZYMULA —
WHEREVER YOU ARE!

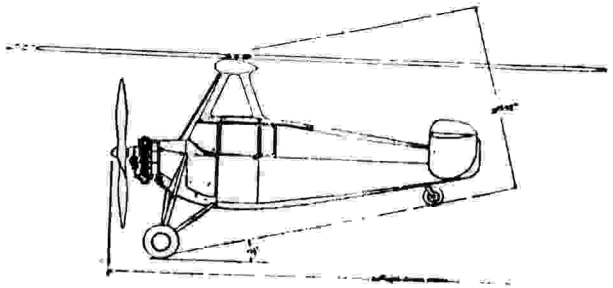






These 3-views contributed by Bill Hannan from 1936 JR. AIRCRAFT YEARBOOK





KELLETT AUTOGIRO CORPORATION
Philadelphia, Pa.
MODEL KD-1 —— 2 PLACE
ENGINE: JACOBS L-4-MA

AUTOGIRO COMPANY OF AMERICA
Willow Grove, Pa.
PA-22 —— 2 PLACE
ENGINE: POBJOY

OUR MAN OUTSIDE by Terry Rimert

The November 1981 issue of "Nations Buisiness" magazine published by the American Chamber of Commerce featured model aircraft in an article, Fliers Who Never Leave the Ground. This was part of a continuing series on life styles for buisinessmen. The article was well done and complimentary to the hobby which was a plesant surprize. Some interesting statistics emerged. The Hobby Industry Assn. of America estimates that as many as 12 million adults and youngsters build or operate models contunously or on occasion. Only 82,000 join AMA however. Hobbiests spend around 300 million ollars on their avocation. That sum breaks down as follows Plastic kits, $175 million; control line kits, free flight planes, gliders and rubber powered planes, $60 million; radio controlled aircraft, $40 million; accessories and fuel, $15 million;-all per year. It is strange or unique to see radio control at the bottom of the list.

The above was copied from "Nations Buisiness" by Fred Komlosy into the Palm Beach Aeronauts newsletter, and was coppied from there by Jim McNeill into the National Newsletter. Fred is an RC flyer, so only goes to the RC field to fly, so he is surprized that radio isn't as big as CL and FF. What surprizes me is that we see so few of the millions of rubber scale model kits that are sold, after they are finished. Sterling models, Comet, Majestic, and Guillows all sell over 60 different rubber scale models each. They must have a huge turnover to keep on makeing that many different kits. There are also lots and lots of modelers flying things round in circles in lots of vacant lots and parking lots around the country. How do we get the press to see this, and put the right share of CL and FF in their magazines? How do we get the shakers and rollers in AMA to recognize that more people fly CL and FF? RC flyers just about are forced to join a club and AMA if they want to fly at all. FF and CL flyers could care less, unless they want to compete, also, most of them arn't into the hobby as deep as RC flyers, so don't make as much noise. so its hard to really know how many there are out there. If manufacturers would count the number of kits sold, instead of the number of dollars taken in, it would tell them a lot about what is most popular, and AMA should try to determine the number of people in the hobby too, instead of where the money goes. The new survey that they sent out with the renewal slips this time may help in that direction, at least a lot more than the old form did. All FF modelers and CL modelers should figure that for each of them in AMA, there are about 5 more who don:t belong, so when they want to get their fair share of attention, they have to make about 5 times as much noise as any RC flyer.

* FRED IS A CLOSET PEANUTEER + MIAMA MEMBER

USA

THE LATEST INDOOR NEWS INSIDE

THE HANGAR PILOT

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NOEL

TO:

JIM MILLER
827 YORKHAVEN RD
CINCINNATI OH 45240

MIAMA INDOOR MEETS

MIAMI/DADE S. COLLEGE 9-5
JAN. 16 APRIL 24, MAY 22
FEB 27 INDOOR WEEK:
MAR 13 WESTBADEN JUNE 12-18

1ST CLASS
NOT JUNQUE MAIL

Dec 5, 1982 CL 103rd St. Sports Complex, Jacksonville, FL Florida Slow Rat Race and AMA Slow Rat Race. CD Terry Rimert
Dec 19, 1982 CL Art's Hobby Shop, 1034 Atlantic Blvd, Jacksonville FL Class 1 Mouse Race, benefit drawing. CD Terry Rimert
Dec 31, 1982-Jan 2, 1983 AAA FF and CL King Orange International, Naval Auxiliary Field, Whitehouse, FL CD Shirley Campbell, 1785 64th Terrace S. West Palm Beach, FL 33406
Feb 13, 1983 South Florida Winter Meet. Ft Lauderdale, FL ½A Gas, (ABCD)Gas, HLG, (A-1,Coupe'd Hiver, P-30)FAI Trials. Lots of very nice prizes. CD Lee Campbell, 1785 64th Terrace S. West Palm Beach, FL 33406
Late April or early May, and July. Central Florida FF meets. CD Jim Bradley, Matt Gewain
CFMAS Indoor Season got off to a roaring start with a change of all the dates. Contact Dean McGinnis, 5275 William Clark Rd. Lakeland, FL 33805 for updated schedule.
Ellis Oglesby, 1928 Suzanne Lane, Lakeland, FL 33803 has found a huge indoor site that he may be able to aquire the use of if there is any interest, 200ft.x400ft.x70ft. Now, if you are interested at all in having a couple meets in a building this size, contact Ellis and let him know it would be worth his while to get permision to use the building, what you fly, and what dates wouldn't conflict with your other flying schedule. Don't dilly dally around, write him right away.
MIAMA Indoor meets are occuring in a new sight. Write Doc Martin 3227 Darwin St. Miami, FL 32019, for new schedule, and map to new sight. MIAMI DADE SOUTH COLLEGE - SEE ABOVE
When writeing all of the above named people, if you expect an answer, send an SASE!!
May 28, May 29, 1982 AAA CL & FF Rebel Rally. CD Arlie Kline
Any one who is going to Minnesota for vacation this winter should write me for the Minneapolis Aero Club winter indoor schedule
Next year at the Jim Kloth Memorial and gathering of the turkeys meet, there will be an event for .020 Replica [illegible]lanes. Comet Sailplanes as designed by Carl Goldberg, not other kinds of sailplanes. McLaughlin is building one, and hopes to be the only one there with a Sailplane so he can win an event. Make sure he doesn't end up with a shoe in build a .020 Sailplane.
David Erbach is sponsoring an indoor ornithopter postal contest. Anyone who is interested in getting in on this should contact David Erbach, 1738 St. Mary's Road *702, Winnipeg, Manitoba R2N 1G8 Canada