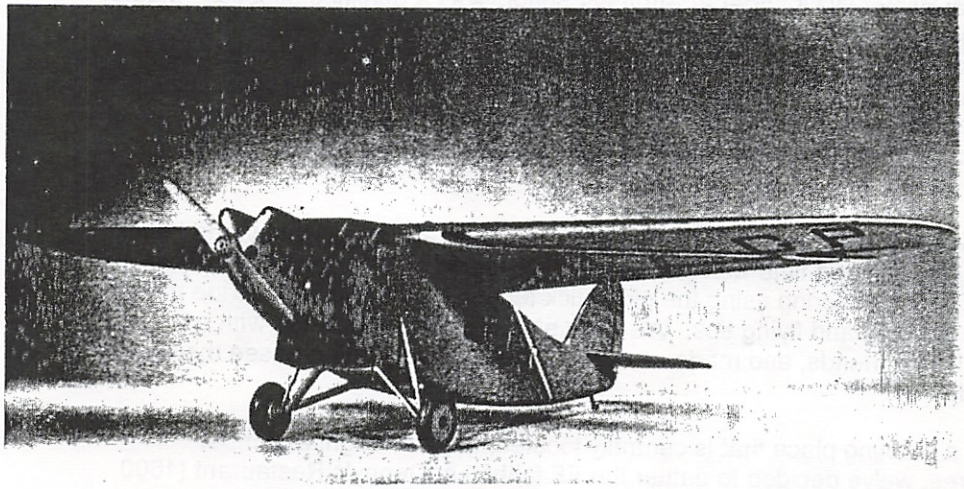
CROSSWINDS



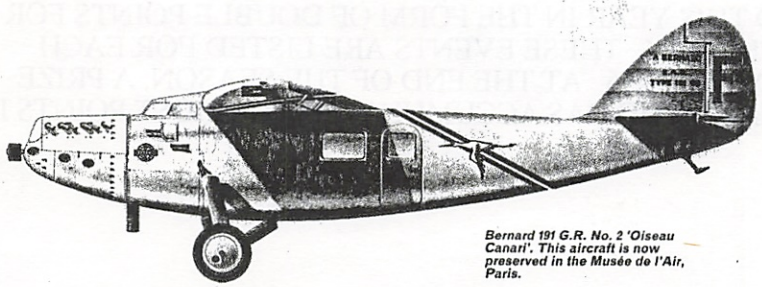
NO. 112

Bernard 191 GR No 2.

BERNARD "YELLOW BIRD" (OISEAU CANARI)

FIRST FRENCH PLANE TO CROSS THE NORTH ALTANTIC

CROSSWINDS
RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OH 44124



Bernard 191 G.R. No. 2 'Oiseau Canari'. This aircraft is now preserved in the Musée de l'Air, Paris.

THE PRESIDENT'S MESSAGE

Greetings fellow Free Flighters. The "building season" is almost over and the "flying season" is upon us. Hope you were able to get a project or two ready to offer to Hung in the skies over LCCC this year.

Our first annual Winter Wallbanger at Andrews School was a qualified success. Mother Nature gave us good driving weather to get there, but was less kind on the return trip. We had enough modelers in attendance to make a good day of flying, but we'd love to have a few more. It sure felt good to twist some Tan II and see some balsa in the air! I hope you'll join us next year for some wintertime flying. We're planning on at least two of these events for '06. Our thanks to Doc Hacker for facilitating access to the site.

We just completed the second annual Free Flight seminar at Parma Hobby and I think it's safe to say that a good time was had by all. Our erstwhile VP, Geoff Phillips, did a demo of tissue covering using the glue stick technique and we had a wide ranging discussion on building and flying tips. We were able to get reacquainted with a couple of old CFFS friends, and made a couple of new ones. Hoping to see them all at the flying field.

In looking for a meeting place that is centrally located, large enough, and most importantly, free, we've decided to gather the FF faithful at Denny's Restaurant (1600 Snow Road) back room for our meetings. As I write this, we haven't been there yet, but if it works out, this could be our regular spot.

Next big event on the club calendar is the KSU indoor contest. If you've never been to the KSU field house you're missing a real treat. It's a whole football field and more under a roof. This is a chance to get some models tuned up for outdoor flying before the season begins. It's cheaper than a round of golf and ten times more fun.

May 22 is the date for a new event for us. We've been asked by the Parma Historical Society to set up a display and/or demonstration at their opening day festivities. The event takes place at the Stearns Homestead on Ridge Road just south of Parmatown. This refreshing swatch of green in the middle of suburbia is operated as a livestock farm and has a variety of activities for kids and adults. They have an enclosed (heated) display area for us if the weather is nasty, and a field in the back where we may be able to do some flight demos if the weather is nice. This is exactly the kind of event that allows us to reach interested newcomers and the sort of activity that we need to cultivate to keep CFFS alive. I hope you'll come out for at least a little while to help promote the hobby we love so well. More details as the date draws nearer.

Keep 'em flying,

Rich Weber - Wingnut

Crosswinds readers with the dreaded red X at issue renewal code No 112 or lower. can send $16 per year to Russ Brown 4909 N. Sedgewick, Lyndhurst, OH - 44124 - USA.

NOTE TO CFFS FLIERS

A NEW INCENTIVE IS BEING OFFERED THIS YEAR IN THE FORM OF DOUBLE POINTS FOR LOCAL (CFFS) 'SPECIAL EVENTS' OF THE DAY. THESE EVENTS ARE LISTED FOR EACH DATE ON THE CONTEST CALENDAR ON PAGE 16. AT THE END OF THE SEASON, A PRIZE WILL BE AWARDED TO THE CONTESTANT WHO HAS ACCUMULATED THE MOST POINTS IN THESE SPECIAL EVENTS.

CHOOSING A MOTOR SIZE FOR A NEW MODEL

One of the great mysteries for beginners in rubber powered FF models can be choosing a motor for their new model. How Long? How wide? What color? Forget that last question. Stick with Tan.

Chris Parent gave me this "rule of thumb" formula some years ago and I have found that is works pretty well to find a good starting point. It assumes a model with a wing loading of somewhere near .5 grams per square inch.

Here's how it works: Figure all up weight of the model. This includes the weight of the motor. Most models fly happily with a motor that's around 25% of the empty weight of the model. If you have a light wing loading, you can use some of that carrying capacity to haul around more rubber. If your model is heavy, you may have to use less rubber to the keep the wing loading reasonable. Adjust accordingly.

Now, take your all-up weight and multiply it by 1.1. That will give you the total motor cross section in 100ths of an inch. Example: 28 gm. empty model x .25 = motor wgt. of 7 grams.

All up weight of 35 grams x 1.1 = 38.5 or .385". Multiply that by 16 to get a conversion factor to16ths if you like to think in a non decimal way. In any case, you'll want a motor that is arond 6.16 16ths.

A loop of 3/16" will be close. Make up a loop with that cross section that weighs around 7.5 grams and you're in business.

Now, the fudge factors.

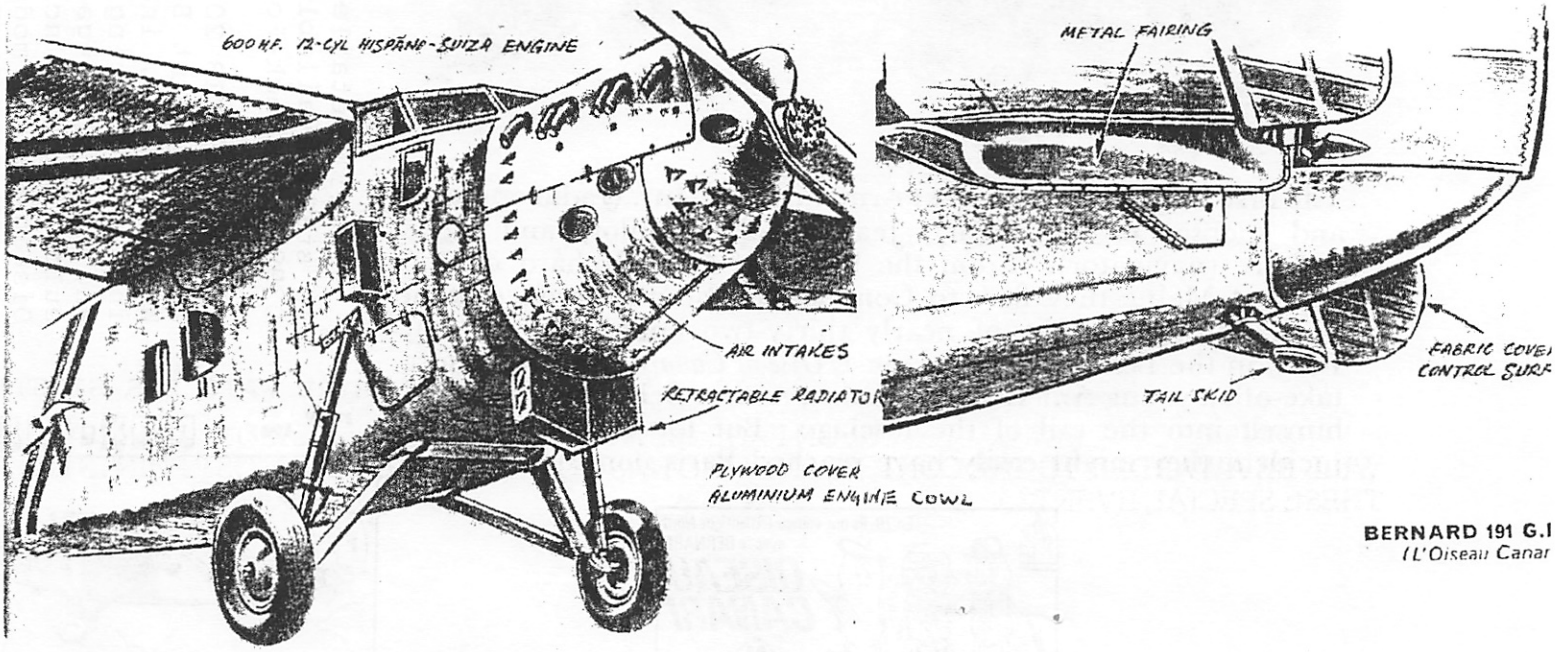
If you have a short nosed model, you'll probably have to add ballast to balance. Aim a little high to allow for the weight of the ballast.
Bigger models (over 24") often fly with motors that are closer to a 1.0 factor.

Peanuts usually need more more. 1.2 is marginal in some.
Very clean models can get by with narrower cross sections. Draggy bipes and such may need a bit more oomph.

The above is courtesy of our President - Rich Weber. Thanks, Rich!

Did you know the Sergei Rachmaninoff, the famous Russian/American composer, pianist, conductor was a principal share holder in Sikorski Aviation and furnished the money to purchase Roosevelt field the takeoff site for many of the Atlantic crossing attempts?

Steve Griebling - CFFS - Flying Aces, 2005



BERNARD 191 G.I
(L'Oiseau Canar

BIG BIRD



The first French crew to cross: Armand Lotti, Jnr. (radio operator and sponsor of the flight), Jean Assolant (pilot) and René Lefèvre (navigator). From the beach at Old Orchard on the coast of Maine they flew to Comillas on the northern coast of Spain during a flight of nearly thirty-two hours, June 13–14, 1929, in the Bernard monoplane *L'Oiseau Canari*. Shortly before take-off, a young American journalist, Arthur Schreiber smuggled himself into the tail of the fuselage. But for this unexpected incident they might easily have reached Paris nonstop.

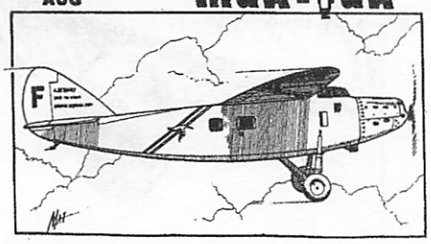


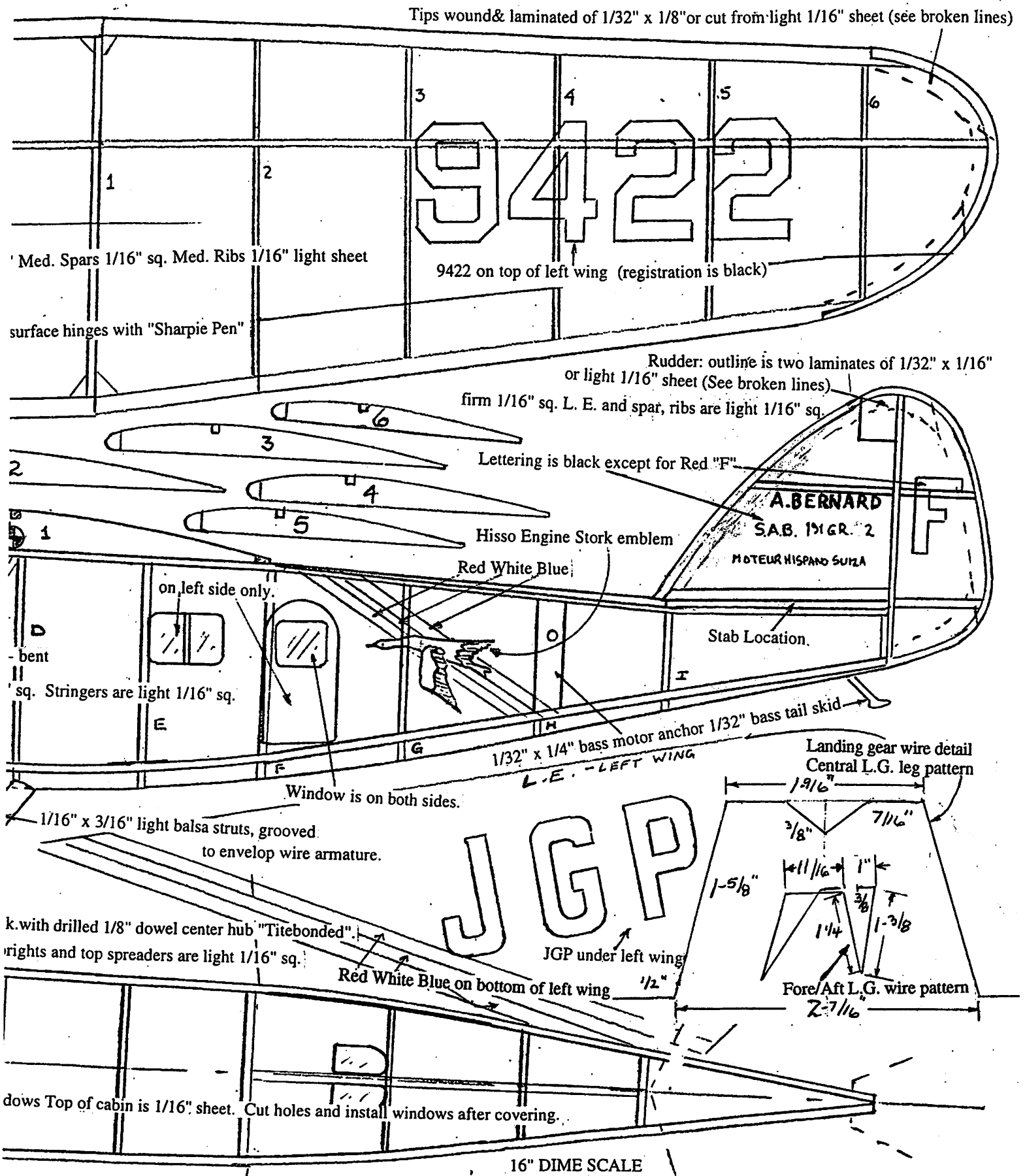
A well detailed Peanut Scale plan of the Oiseau Carnari by J. F. FRUGOLI is still available from Peck-Polymers, P.O. Box 710399-XW ,Santee CA 92071-0399. www.Peck-Polymers.com

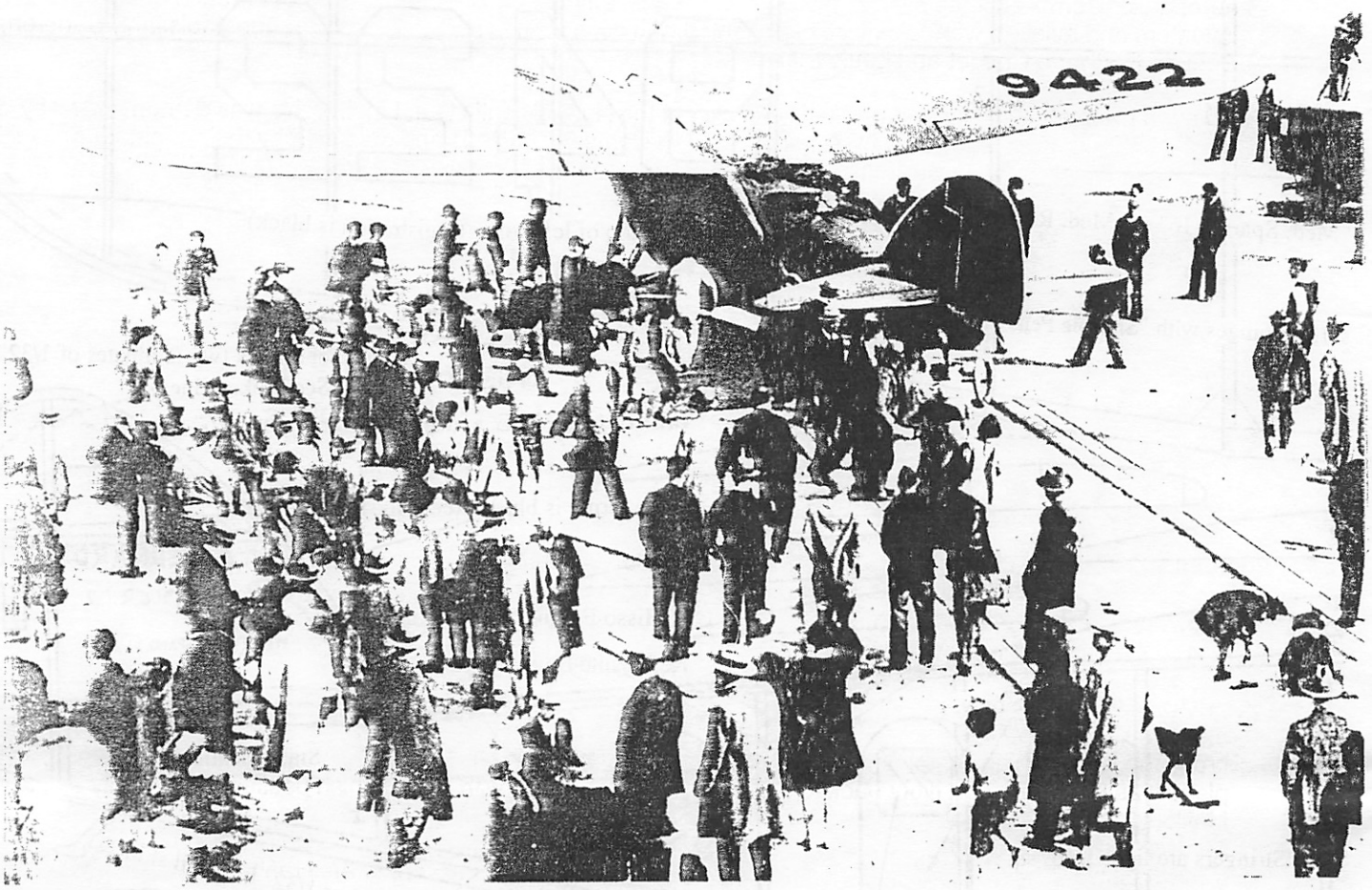
The JAN/FEB 2005 MAX-FAX Newsletter is dedicated to highlights of the late Col. Hurst Bowers USAF Ret. Hurst flew B-25's, and continued in post WW II service, including air attache' duty in Paris, France. Modeling fun included starting FlyLine Models, model plans, Curator of the AMA Museum, and host of hangar session lunches with D.C. Maxicutters. The MAX-FAX eulogy photos include Hurst, Dave Rees, and Doug Buchanan holding three big Oiseau Canari models built from a 28-1/2 inch wingspan plan by Hurst with MAX-FAX JULY/AUGUST 1987.

BIRD WATCHERS SIGHTINGS

JULY AUG 1987 max-fax




Tips wound& laminated of 1/32" x 1/8"or cut from light 1/16" sheet (see broken lines)
9422
Med. Spars 1/16" sq. Med. Ribs 1/16" light sheet
9422 on top of left wing (registration is black)
surface hinges with "Sharpie Pen"
Rudder: outline is two laminates of 1/32" x 1/16"
or light 1/16" sheet (See broken lines)
firm 1/16" sq. L. E. and spar, ribs are light 1/16" sq.
Lettering is black except for Red "F"
A.BERNARD
S.A.B. 1916 GR. 2
MOTEUR HISPANO SUIZA
Hisso Engine Stork emblem
Red White Blue
on left side only.
Stab Location.
bent
sq. Stringers are light 1/16" sq.
1/32" x 1/4" bass motor anchor 1/32" bass tail skid
L.E. - LEFT WING
Landing gear wire detail
Central L.G. leg pattern
Window is on both sides.
1/16" x 3/16" light balsa struts, grooved
to envelop wire armature.
JGP
JGP under left wing
k.with drilled 1/8" dowel center hub "Titebonded".
rights and top spreaders are light 1/16" sq.
Red White Blue on bottom of left wing
Fore/Aft L.G. wire pattern
dows Top of cabin is 1/16" sheet. Cut holes and install windows after covering.
16" DIME SCALE
re yellow except as noted
BERNARD "CANARY" (OISEAU CANARI)
grees down and right thrust.
Plan enlarged, re structured and drawn from Peck Polymer's "Peanut" plan by Steve Griebling for "Crosswinds"



PROOF POSITIVE THAT THE AMERICAN REGISTERED "YELLOW BIRD" HAD A ROWDED RUDDER!



AFTER THE NORTH ATLANTIC CROSSING.
PHOTO IN FRONT OF THE HOTEL 'LOTTI' IN PARIS
LEFT TO RIGHT:
LEFÈVRE, ASSOLANT, SCHREIBER, LOTTI, LOTTI'S FATHER.

Après la traversée de l'Atlantique Nord, photographiés devant l'hôtel Lotti, de gauche à droite : Lefèvre, Assollant, Schreiber, Lotti et Lotti père.

THE YELLOW BIRD - HISTORY

Although the Wright Brothers and Charles Lindbergh were justifiably honored for their undeniable contributions , the greatest enthusiasm and interest in aviation was centered in France in the early days. Indeed, many of the aeronautical terms such as aileron, fuselage, decalage, empennage and aeroport are of French origin. French inventors and aviators were also well represented with such names as Voisin, Delegrange, Moissant, Caudron, the Seguin Brothers, Clerget and Louis Bleriot.

An even more astonishing and dramatic crossing of the North Atlantic than Lindbergh's was demonstrated by a single engined monoplane built by the S.A. Bernard Company of Paris and designed by their engineer M. Galtier. This was the second of three Bernard 191 models known as the Oiseau Canari or "Yellow Bird".
The first and third of the Bernard 191's were painted bright red and had a rather pointed rudder tip. All three planes had a white Stork emblem painted on the fuselage sides, but #2 was painted yellow and had a more rounded rudder profile. At the time the only other French plane thought capable of crossing the Atlantic was the Breguet 19TR which was a sesqui plane with a very small lower wing. One of the contenders in the 1927 attempts was Joseph LeBrix who, in 928, still favored the trimotor designed by René Couzinet for North Atlantic crossings in spite of Lindbergh's success in a single engined monoplane.

The Bernard 191's were basically stripped down versions of the commercial model 190. The Canari (model 191-02) was delivered to test pilot Paillard shortly after the delivery of model 191-001 on August 5, 1928. Model 191-001 christened as the "France" was first flown by Paillard in early April 1928. Like all model 191's it was powered by a 600 hp. Hispano-Suiza 12Lb engine. The #001, "France" was purchased by Count Louis de Mailly-Nesle and was piloted by Louis Coudouret. It was flight tested without registration or air worthiness certificate and was intended for a transatlantic crossing with navigator Louis Mailloux . It left Le Bourget in the dawn of April 25 with 4200 liters of fuel in good weather conditions. With a 20 kph headwind, they headed north , but lost 1000 liters of fuel accidentally on the takeoff run, then narrowly cleared electric lines , but fouled the telephone lines at the end of the field, ripping off the engine cover and losing much of the remaining fuel. After a half turn, they landed. The "France" was taken to Orly field for repairs and fitted with a new geared Hisso engine, but still had no registration.

By this time the French government had forbidden any further attempts to cross the North Atlantic because of so many mishaps so the plane was flown to Spain in hopes that the Spanish authorities would allow an attempt to cross the ocean. The Spanish, showing respect to the French authorities, also prohibited the crossing, so the plane was prepared for a flight back to Paris. Coudouret took off with two Spanish passengers on July 7, leaving Mailloux in Seville, but overcast weather and an engine losing power forced him to fly at less than 500 meters and he was finally forced to land in a field near Angouleme where he hit a tree. A wing was broken off and the plane turned upside down. The two Spanish passengers were the only survivors of the crash.

Bernard 191-03 was used for payload and speed trials with Paillard piloting and Eugene Camplan as passenger. It left Le Bourget and made a round trip of 1000 km, to Gondreville with a two ton (4,400 lb.) load at an average speed of 223.546 kph. On Dec. 7 Camplan and Paillard flew from Le Bourget to Istres through the dry , mountain/ coastal wind known as the "Mistral". On Dec. 22 an oil leak interfered with speed and load trials for 1000 km and 2000 km distances with a one ton (2,200 lb.) load.

The most famous of the Bernard 191's was #2, the Oiseau Canari (factory number 2908) which was yellow with red, white and blue stripes on the wings and fuselage and a white Stork emblem on both sides of the fuselage. It was purchased by Armand Lotti the son of a wealthy Paris hotel owner who had his own money. The 29 year old Lotti had lost the sight of one eye in an accident and intended to prove his capabilities by becoming a pilot, but of course, was unable to obtain a license because of his handicap. Lotti then was introduced to the military pilot Sgt. Jean Assollant by a mutual friend who, in turn, engaged the services of expert navigator Sgt. René Lefèvre. The two sergeants were able to obtain military leave of absence and a North Atlantic crossing was planned in spite of the government's ruling and the disapproval of Lotti's father. Lotti was to serve as radio operator to justify his presence aboard. The "Canari" was refused a navigation certificate with a full fuel load, but the three men attempted an unauthorized transatlantic crossing on Sept. 3, 1928, but the plane never left the ground because a mechanic had inadvertently closed the fuel valve from the main tank and the engine died when the carburetor sump ran dry. A successful takeoff occurred at dawn on Sept. 4, but the crew decided to try for a South Atlantic east-west crossing because of the announcement of a low pressure weather cell over the North Atlantic, and planned to return by flying from west to east over the North Atlantic.
The "Canari" landed at Casablanca at 4:40 PM. and departed for Saint Louis du Senegal on Sept. 6, but a radiator drain valve leak forced them to land almost immediately. Those repairs were quickly made, but during a taxi run the landing gear was badly damaged by a deep, unmarked ditch in the field. Repairs to the landing gear were possible only back in Paris, and the media, by this time, were convinced that the whole proposal was nothing but a naughty publicity stunt, and turned strongly against all three men in their writings.

Assolant and Lefèvre were then called back to military duty but immediately resigned. On Oct. 6 they flew the Bernard back to Paris with the damaged landing gear to have it repaired. At this time a radio was installed which weighed 40 kg. and the wind driven electric generator was made retractable to reduce drag.

Since transatlantic flights were still prohibited, Lotti decided to fly the plane to Southampton, England on April 17, 1929 where it was loaded on to the "Leviathan" a ship of the United States Lines that would not be stopping at any French ports on its way back to the USA. The Hispano - Suiza company generously provided an on-site mechanic at the disposition of the crew.

The plane was re-assembled at Roosevelt field, Long Island but the field, by this time, had accumulated so many bumps and ruts that it was considered to be unsuitable as a takeoff site for a five ton airplane with a 600 hp. engine. After visits to several other airfields, it was decided to use Old Orchard field north of Boston which was over two km. long and flat with a firm sand surface. The American pilot, Chamberlain, kindly provided a "Pioneer" blind navigation device which included a gyroscope, allowing Assolant to maintain level flight, and also gave advice on navigation. All other instruments were of French origin. On may 29, 1929 they took off, but the low octane American fuel caused excessive pre-ignition and, after jettisoning most of the fuel, they landed in less that 20 minutes and filled the tanks with a mixture of benzol and gasoline. Meanwhile the French authorities instructed the French ambassador to keep the plane from leaving the USA, so an American license, NY-9422, was obtained and painted on the top of the right wing. At this time the plane was officially named "Yellow Bird" and its American registration allowed it to fly anywhere!
On June 13 at 10:08 a very long takeoff was made with the plane just clearing the promenade pier at the edge of the beach. Assolant could not understand why the usually placid aircraft was flying so poorly, requiring down elevator to keep the tail up, and barely clearing the waves. He was only able to reach 300 meters of altitude by the time they had reached Nova Scotia. The crew was getting ready to throw out the radio to reduce weight when the head of journalist, Arthur Schreiber, poked into the cockpit and he introduced himself!
Schreiber had hidden himself in the aft end of the fuselage, badly upsetting the center of gravity which accounted for the "heavy tail" flight attitude. Once he was forward, flight trim was restored, but running the engine at full throttle for so long had resulted in heavy consumption of fuel so it was decided to fly to Spain rather than Paris.

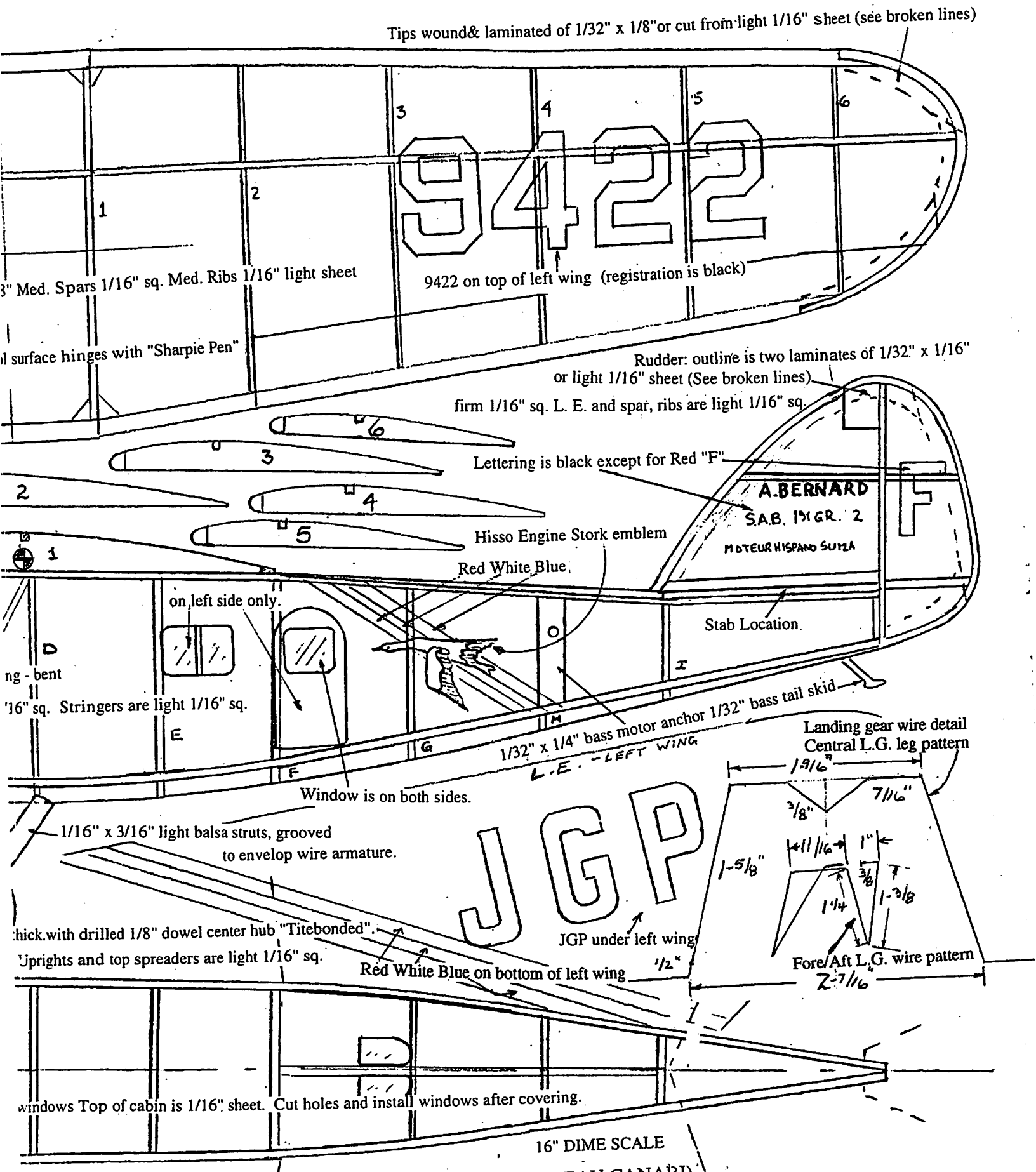
The "Yellow Bird" traveled through several violent storms where intense lightning and wind rocked and rolled the plane right and left all through the night. All of Lotti's attempts to report their position by radio were unheard and , flying away from all navigation routes, they were completely isolated. At 1:15 AM. at an average speed of 189 kph. they spotted European soil. The "Canari" had flown for 26 hours and 40 minutes and touched down at a little beach at Oyambra 4 km. from the village of Comillas on the North coast of Spain at 8:40 PM. on June 14. The fuel tank contained 250 liters of gasoline, the oil tank was dry and the radiator water had completely evaporated by the completion of the 5,300 km, crossing!
Thanks to radio, the world had been informed of the successful flight and the first congratulations arrived from the French Ministry of Air. The former 'delinquents' were now heroes and became respectable gentlemen!
This outstanding single engined monoplane had carried **four** men across the North Atlantic only two years after Lindbergh's famous flight! It could have easily flown from Boston to Paris if Schreiber had not been a stowaway! The 12" Crocodile, "Rufus", carried on board by Arthur Schreiber had endured the journey without complaint!

A small quantity of low octane fuel was provided by the Spanish so the plane could fly as far as Cazaux for re-fueling and then on to Paris where officials, the press and a large crowd had gathered. Three St. Christopher medals were loaded on to the plane for additional safe journeys.

With the French license F-AJGP the "Canari" made a 8,720 km, tour to the principal cities of Europe without Arthur Schreiber, the first aerial stowaway.
The yellow Bernard 191-02 is now on display at the Museum of Air and Space in Paris - the only survivor of the Bernard company.

References: Les Avions de Bernard by Jean Liron DOCAVA 31 Editions LaRiviere 15-17 Qua'de L'Oiseau Canari (1990) provided by Russ Brown
Atlantic Wings 1919-1939 by Kenneth McDonough, Model Aeronautical Press, Ltd. Hemel Hempstead: Herts 1966 provided by Rich Weber
Atlantic Fever by Edward Jablonski - The Macmillan Co. - New York

Many thanks to my daughter, Margi Griebling-Haigh, and to Jane (Mrs. David) Montgomery for their invaluable translations from the French texts, and to Paul Good for providing the color three view reprints of the Canari.

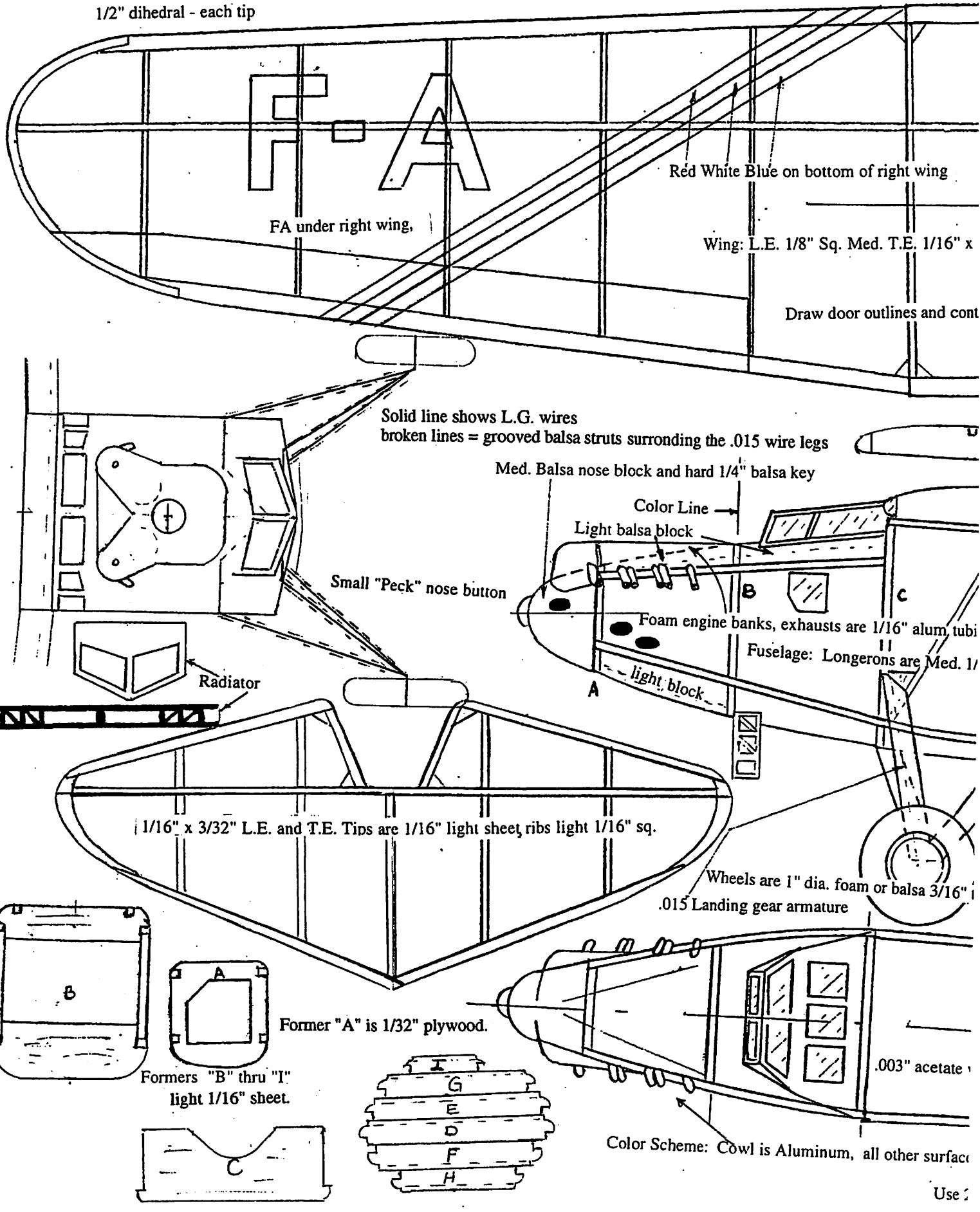


es are yellow except as noted

degrees down and right thrust.

BERNARD "CANARY" (OISEAU CANARI)

Plan enlarged, re structured and drawn from Peck Polymer's "Peanut" plan by Steve Griebling for "Crosswinds"


1/2" dihedral - each tip
FA
FA under right wing,
Red White Blue on bottom of right wing
Wing: L.E. 1/8" Sq. Med. T.E. 1/16" x
Draw door outlines and cont
Solid line shows L.G. wires
broken lines = grooved balsa struts surronding the .015 wire legs
Med. Balsa nose block and hard 1/4" balsa key
Color Line
Light balsa block
Small "Peck" nose button
Foam engine banks, exhausts are 1/16" alum tubi
Fuselage: Longerons are Med. 1/
light block
Radiator
1/16" x 3/32" L.E. and T.E. Tips are 1/16" light sheet, ribs light 1/16" sq.
Wheels are 1" dia. foam or balsa 3/16"
.015 Landing gear armature
Former "A" is 1/32" plywood.
Formers "B" thru "I"
light 1/16" sheet.
.003" acetate
Color Scheme: Cowl is Aluminum, all other surfac
Use

BERNARD 191 - YELLOW BIRD (OISEAU CANARI)

Construction of the model is typical of Dime Scale models with the following exceptions:
1. The rounded corners on the bottom of the fuselage on my model were made of a piece of light 1/32" sheet, 1/2" x 10" soaked in water and wrapped around a 5/32" diameter aluminum rod. The balsa was held to the rod by lightly strapping it with 3/16" wide rubber strip under low tension. (If wrapped too tightly you will dent the balsa) . While the balsa is still wet, bend the rod to the contour of the lower longerons (side view), then let it dry. When dry, remove the rubber strip and slit the resulting "U" shaped balsa piece lengthwise with a very sharp knife or razor blade. Then taper the aft ends to about 1/16" wide and position and glue the pieces on formers and longerons between station "E" and "H". I recommend you strap them lightly with thin rubber strips - again under very low tension. When the glue has set up in this area, position and glue the strips forward and aft of formers "E" and "H", strapping the shaped balsa strips with thin rubber strip again. When all is dry, sand the strips to blend with the longerons and nose area. You may also use this method for the top of the fuselage between the wing and the stab. If you do, use replicas of formers "G", "H" and "I" for the top as well, and make another set of "U" shaped corner pieces. The front end will be flattened to blend in with the trailing edge of the wing, and these corner pieces will be left straight, without the need for bending the aluminum rod upon which they are wrapped.
I have shown dashed lines across the formers if you do not want to have the formers support the tissue between the rounded corners. I think the model looks better this way! If you use the rounded corners on the top of he model, the center stringer is optional.

2. The landing gear wires are all .015 music wire. The central wire is shown full size on the plan. When it has been carefully bent to shape cement it to the rear of former "C" .6" above the longerons, then make triangular fillets of scrap to fill in between the uprights and diagonals at station "C". This is to give support to the covering. The fore/aft wires are bent to the pattern shown on the plan, positioned so the horizontal portion (11/16" long) of the front wire will be in contact with the underside of former "C" . The rear legs should touch former "D" and be about 1" apart. Do not cement either of these in place until you have covered the model. Both the front and rear auxillary wires are supported by strips of 1/32" x 3/32" balsa , painted yellow and extended across the fuselage. See the three view drawings for the appearance of these.

3. The nose section is filled in with very light balsa between station "A" and "C" on top, and between station "A" and "B" on the bottom. I recommend you hollow these pieces with a gouge either before or after they are in place to reduce their weight. Use 1/4" balsa pieces on the bottom and 3/16" on the top.

4. I suggest you make a tiny fillet of scrap 1/16" sheet to fit the leading edge of the stabilizer across the top longerons and center the top stringer against it. Sand the edges of it so it forms a peak at the stringer.

5. Note that "Dime Scale" models must not have laminated tips. I have shown suggested sheetwood tip outlines on the plan for this reason.

The Yellow Bird had Red White and Blue diagonal stripes on the underside of the wings and across the fuselage. French registration letters appeared on the bottom of the wings, but American letters were applied to the top of the wings for the transatlantic flight once it was reassembled in the USA. The large black "F" remained on the rudder along with the red lettering "A. BERNARD S.A.B. 191 G.R. No.2 and MOTEUR HISPANO SUIZA". The stork emblem was white, outlined in black. The radiator was retractable. I suggest leaving it off unless you want to make a point! Note that the area from ":B" forward was aluminum colored. The remained of the plane was yellow. There were numerous windows and doors on the plane. I suggest adding them after the covering is complete, although you may want to cover the fuselage sides, shrink the tissue and dope it then add the windows before covering the top and bottom of the fuselage. In this case you could apply the plastic windows on the inside surface of the tissue.

I suggest you use a 6" prop with a 1.3:1 P:D ratio. If nose weight is required to get the model to balance why not use a plastic prop.

Design Dimensions - Full Size Aircraft

Wing Span:	17.30 m	(56.75')
Length:	12.80 m	(50')
Height:	3.90 m	(12.79')
Wing Area:	42.90 sq. m	(140 sq.')
Empty Weight:	2,120 kg	(4664 lbs.)
Weight of fuel	2,980 kg	(6556 lbs.)

Engine: 600 hp. Hispano Suiza 12Lb 3,140 liters displacement.

Steve Griebling - CFFS Ref. "Bernard Aeroplanes"

CFFS CONTEST EVENTS AT LORAIN COMMUNITY COLLEGE ATHLETIC FIELD RT 301 S.

1. FAC PEANUT SCALE, FULL POINTS
2. HI-Wing CABIN PEANUT EXPERIMENTAL
3. HI-Wing CABIN PEANUT PRODUCTION
4. DIME & HI FLYER RUBBER SCALE
5. FAC RUBBER SCALE
6. OHIO FUNK & WACO LTD. M.L. AT 11:30
7. FAC JUMBO RUBBER SCALE
8. PIONEER THRU 1914 RUBBER SCALE
9. GOLDEN AGE CIVIL AIRCRAFT
10. GOLDEN AGE MILITARY A.C.
11. FAC No. CAL PROFILE SCALE
12. No. CAL WW II 3 FLT. TOTAL
13. FAC POWER SCALE ELECT or CO2
14. O.T. GAS REPLICA or CO2
15. EMBRYO ENDURANCE (J) (S) (O)
16. P-20, 8" PROP, 20 gm. 4gm. RUBBER 3 FLT.
17. FAC PULP FICTION SCALE, 3 FLT. TOTAL
18. JR. RUBBER 3 FLIGHTS, NO MAX.
19. H.L. GLIDER (J) (S) (O) $1 POT PRIZE
20. 6" STICK CATAPULT GLIDER, $1 POT PRIZE
21. FAC O.T. RUBBER 36" W.S. MAX. $1 POT PRIZE
22. FAC O.T. STICK 36" MAX. W.S. $1 POT PRIZE
23. FAC O.T. TWO BIT 25" W.S. MAX, $1 POT PRIZE
24. O.T. JIMMIE ALLEN R.O.T., $1 POT PRIZE
25. MODERN CIVIL SCALE 3 FLIGHT TOTAL
26. MODERN MILITARY M.L. 12:00
27. WW I MULTI WING PEANUT M.L. 12:30
28. WW I MULTI WING FAC M.L. 1:00
29. WW II PEANUT COMBAT M.L. 1:30
30. WW II FAC COMBAT M.L. 2:00
31. BENDIX PRE WAR RACE M.L. 2:30
32. GOODYEAR & FORMULA ONE M.L. 3:00
33. GREVE INLINE ENGINE RACE M.L. 3:30
34. THOMPSON RADIAL ENGINE RACE M.L. 4:00
35. FAC LOW WING MILITARY TRAINER M.L. 11:00
36. ALL SCALE FLYING HORDE M.L. 5:00

FAC RULES APPLY WITH INSPECTION OF No. CAL, DIME AND COMBAT M.L. FOR MINIMUM DETAIL. O.T. MUST BE BUILT TO PLAN WITH PLAN PROVIDED FOR INSPECTION. NO SIZE CHANGE FOR 25" MAX. PER PLAN O.T. FLYER MUST PRE SELECT EVENT FOR MULTIPLE OPTION MODELS. SPECIAL EVENTS EARN DOUBLE CREDIT TOWARD ONE "YEAR END PRIZE" AWARDED FOR THE MOST ACCUMULATED POINTS.

CFFS WILL BE HOLIDING **MONTLY MEETINGS** THE THIRD THURSDAY OF THE MONTH AT "DIMITRI"S" RESTAURANT AT THE CORNER OF BROADVIEW AND SNOW ROADS AT **7:00 PM.** ON : APRIL/21,MAY/19,JUNE/16,JULY/21 & AUG./18.

MAY 1 SPRING CLOUDBUSTERS INDOOR CONTEST AT FLINT, MI. INDOOR SWING. C.D. GEORGE LEWIS (810) 329 6833
MAY 15 CLOUDBUSTERS OUTDOOR FAC AT BROOME PARK, FLINT, MI. C.D. DAVE LIVESAY.
FLINT MEETS ARE ALSO BEING HELD ON 6/5, 6/26,8/21, 9/25, 10/16 & 11/6.

SUNDAY MAY 29 - 10AM-5PM CFFS AT L.C.C.C. ELYRIA, OH. I -90, EXIT 148 TO ABBE RD. (CHECK HOAG RD. OR UPWIND). *Special Events → 1, 4, 11, 26, & 35.* C.D. - RUSS BROWN (216) 382-4821

JUNE 1-5 USIC NATIONAL INDOOR CHAMPS AT JOHNSON CITY, TN.
JUNE 11-12 DAYTON Mc COOK FAC & CIA F.F. AT MUNCIE, IN. SPRING MEET & CIA O.T./NOSTALGIA

SUNDAY JUNE 19 CFFS AT L.C.C.C 10AM TO 5PM C.D. - JIM HYKA (216) 481-6525
SPECIAL CLUB EVENTS: FAC RUB SCALE, EMBRYO, G. AGE CIVIL, WW I PEANUT & WW I FAC MASS LAUNCHES

JUNE 24-26 WACO FLY-IN AT WYNKOOP FIELD, MOUNT VERNON, OH.
JULY 8-10 TAYLORCRAFT FLY-IN AT ALLIANCE, OH. BARBER FIELD.
JULY 14-17 FAC NON-NATS AT GENESEO, N.Y. C.D LIN REICHEL (814) 833 0314
JULY 25-31 EAA ARI VENTURE AT OSHKOSH, WI. www.airventure.org.

SUNDAY JULY 31 CFFS AT L.C.C.C 10AM TO 5PM C.D. - GORDON ROBERTS (216) 749-4817
SPECIAL CLUB EVENTS Hi Wing PEANUT, FAC O.T. RUBBER CABIN, DIME SCALE, WWII PEANUT & FAC WWII M.L.
AUG 1-5 AMA FF NATS AT MUNCIE, IN.

SUNDAY AUG 7 CFFS AT L.C.C.C 10AM TO 5PM C.D. - PETER ZBASNIK (216) 476-4824
SPECIAL CLUB EVENTS: ELECT OR CO2 POWER SCALE, FAC O.T. STICK, G. AGE MILITARY, GREVE & THOMPSON M.L. RACES

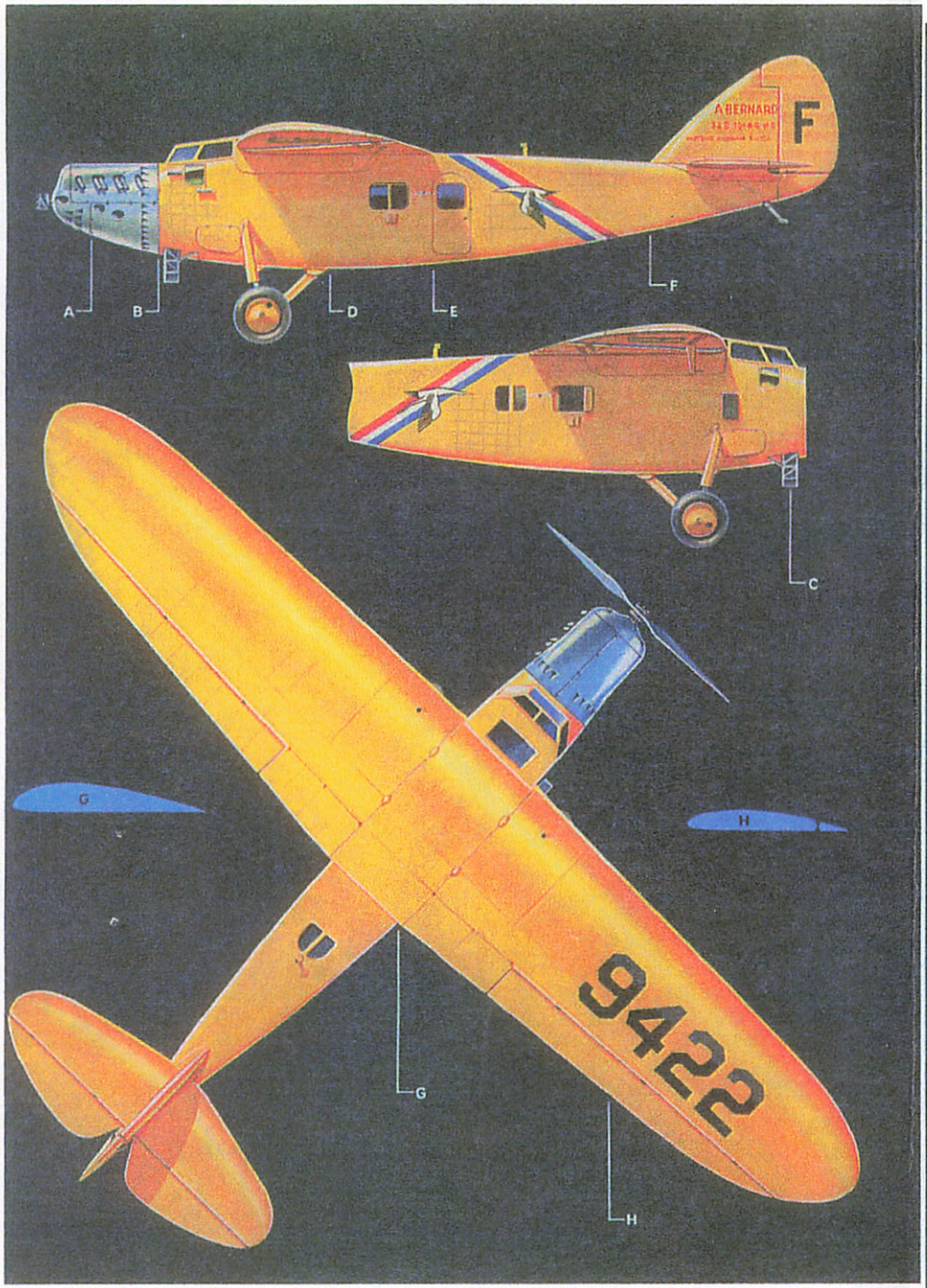
AUG 18-21 NOFFA F.F. AT MUNCIE, IN. C.D. CHARLIE JONES (440) 833 7377
AUG 24 AERONCA FLY-IN AT ALLIANCE, OH. BARBER FIELD
AUG 24 JIMMIE ALLEN POSTAL & FAC AT PENSACOLA NAVY STE. 8A ON 9 MILE RD. CALL PAUL GRABSKI (850) 475 2275 TO BE ON GUEST SITE LISTING
AUG 26-28 EAA MID EASTERN FLY-IN AT MARION, OH.

SEPT 2-4 PARMA HOBBY & CFFS DEMO AT BURKE AIR SHOW, CLEVELAND LAKEFRONT.
SEPT 10-11 FAC OUTDOOR CHAMPS AT MUNCIE, IN. C.D LES BIRDSAL & VON ROTTENSOX (313) 835 7141

SUNDAY SEPT 18 CFFS AT L.C.C.C 10AM TO 5PM C.D.- DAN KANE (740) 223-7471 FAX (740) 387 0853
SPECIAL CLUB EVENTS: MULTI ENGINE RUB SCALE, TWO BIT O.T., PULP FICTION, BENDIX & GOODYEAR M.L. RACES
SUNDAY OCT. 2 CFFS AT L.C.C.C. 10AM TO 5PM C.D.- JIM HYKA (216) 481-6525
SPECIAL CLUB EVENTS: O.T. JIMMIE ALLEN, O.T. REPLICA ELECT & CO2, FUNK & WACO, WWII No. CAL.

CFFS INDOOR AND S.O. FLYING IS ON SUNDAYS AT ANDREWS SCHOOL NOON TO 5PM. CHECK DOC HACKER (216) 486 4990, OR DON SLUSARCZYK (440) 918 0290. SEND $ CONTRIBUTIONS FOR USE OF THE SCHOOL TO DR. VERNON HACKER 25599 BRECKENRIDGE, EUCLID, OH. 44117-1807. THE GOAL IS $600 PER YEAR.
SAM CHAMPS IS AT LAS VEGAS, N.M. FOR F.F., NFFS, NOSTALGIA AND SAM RC. , R/C/ NOSTALGIA.

CFFS INDOOR CONTEST ACTION - APRIL 10 AT KENT STATE UNIV FIELD HOUSE (SEE MAP)
CD MIKE ZAND (216) 524-3480.


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