

# MAX FAX

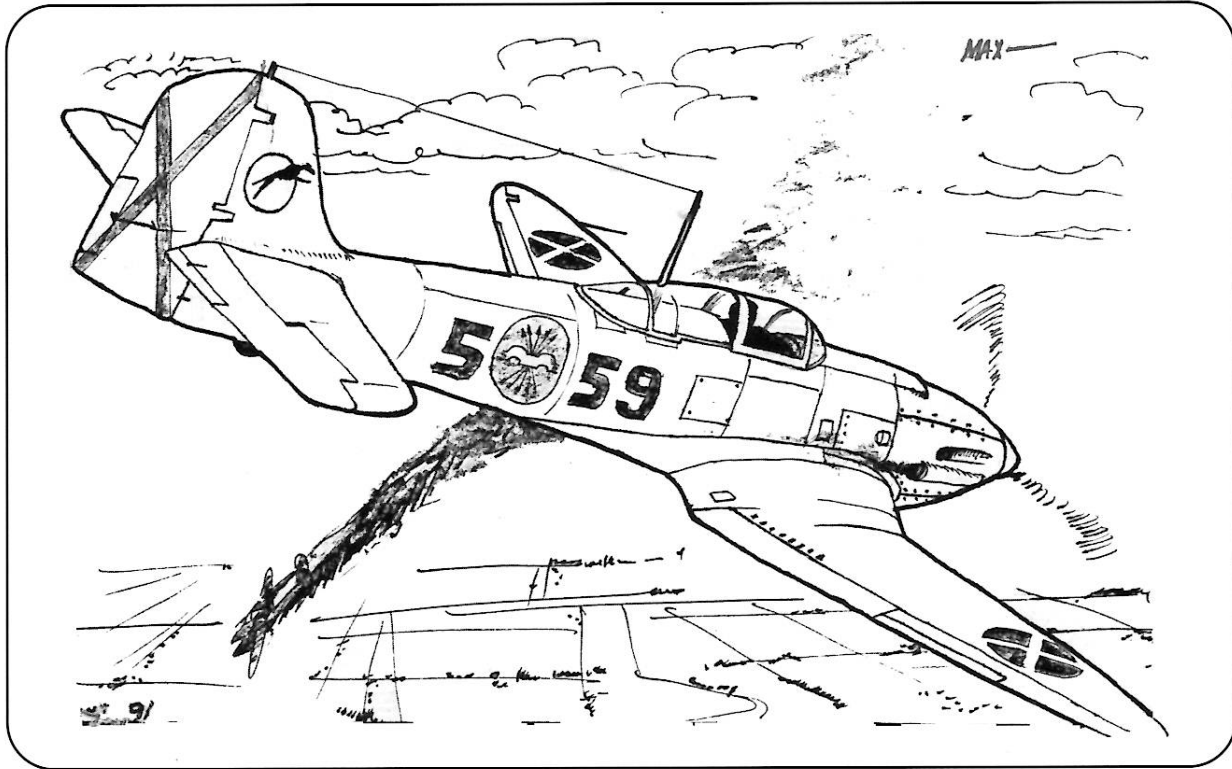


Journal of the D. C. Maxcutters

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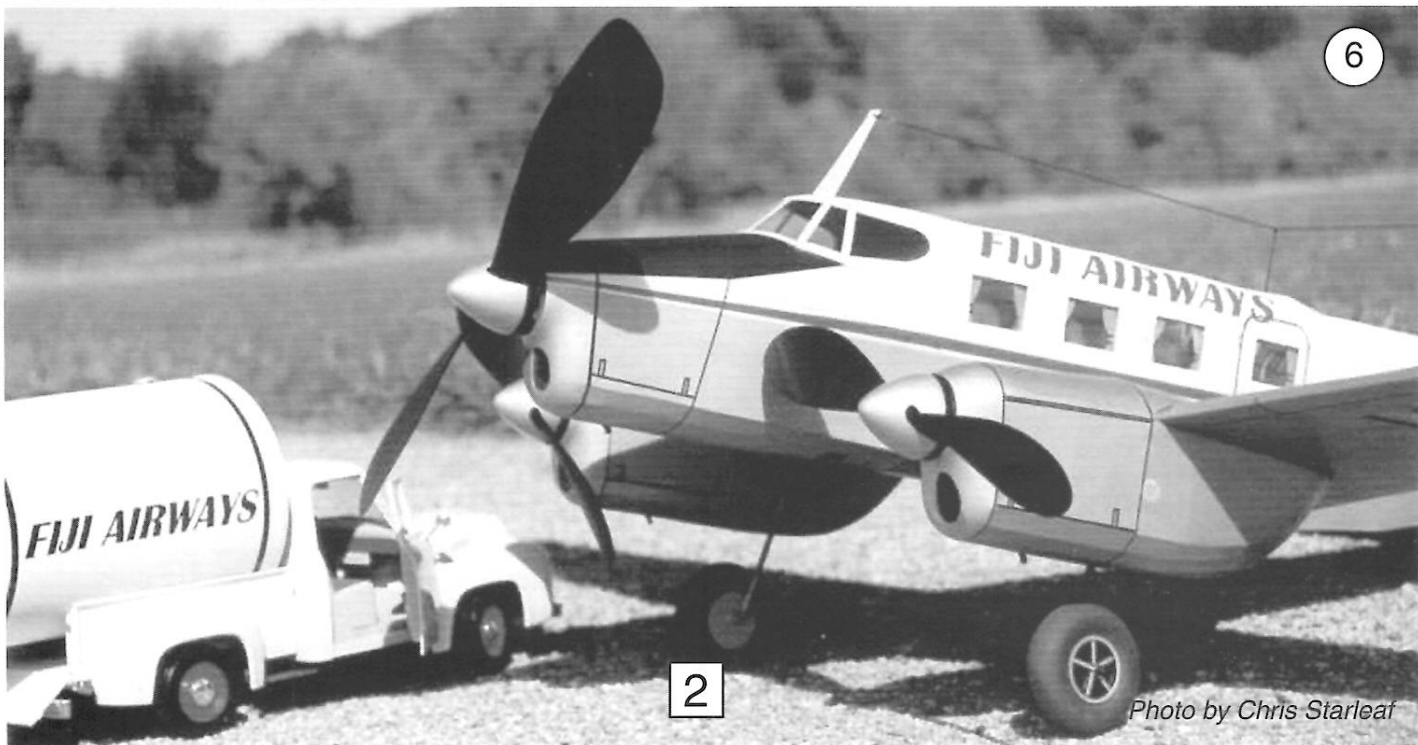
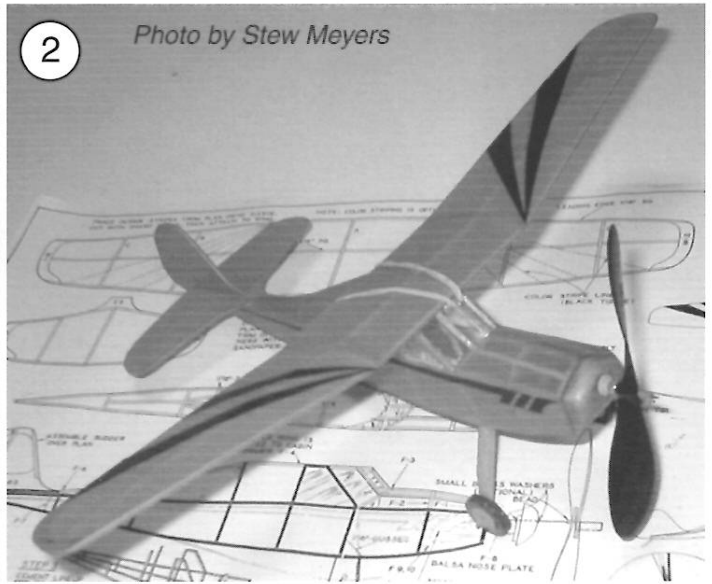
Editor: Stew Meyers

JAN/FEB 2004



## COMING ATTRACTIONS.

- JANUARY 4, 2004                      MECA COLLECTO SUNDAY 12 NOON -4:30 PM SPONSORED BY SAM CHAPTER 10 CAAMA  
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- JANUARY 10, 2004                      NBM DELTA DART SESSION for JUNIOR GIRL SCOUTS SATURDAY 10AM TO 1 PM
- JANUARY 10, 2004                      NBM DELTA DART SESSION for CUB SCOUT WEBELOS SATURDAY 2PM TO 5 PM  
VOLUNTEER INSTRUCTORS WARMLY WELCOMED FOR THESE AND ALL DELTA DART SESSIONS
- JANUARY 18, 2004                      NATIONAL BUILDING MUSEUM FLYING SUNDAY 10AM - 5 PM  
(Martin Luther King, Jr. weekend)
- FEBRUARY 14, 2004                      NBM FAMILY DELTA DART SESSION (8 YEARS AND OLDER) SAT 10 AM TO 1 PM
- FEBRUARY 14, 2004                      NBM DELTA DART SESSION for CUB SCOUT WEBELOS SATURDAY 2PM TO 5 PM
- MARCH 7, 2004                          NATIONAL BUILDING MUSEUM FLYING SUNDAY 10AM - 4PM
- MARCH 27, 2004                      NBM DELTA DART SESSION for JUNIOR GIRL SCOUTS SATURDAY 10AM TO 1 PM
- MARCH 27, 2004                      NBM DELTA DART SESSION for CUB SCOUT WEBELOS 2PM TO 5 PM
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- MAY 1,2, 2004                          EASTERN US FREEFLIGHT CHAMPS INGLESIDE, MARYLAND.



# Jan-Feb 2004 MAXFAX

*Stew Meyers Editor*

This is not a theme issue but rather a potpourri of stuff that I have gathered up along with some current events. We continue with a Scientific High-Flyer plan (the SF-1) as we will until we have presented all that are not easily obtained elsewhere. If you have any of those listed as missing please contact Dan Driscoll or myself.

Claude Powell has provided all eight known Janick Model Engineering plans from the early seventies. We present the Fleet biplane this time.

John Lewars has sent me some nifty plans. We have his Alexander Eaglerock Bullet in this issue.

We also have a postwar Comet Dimer *Zippy*, again the plan provided by Claude. This appealed to me so much that I built it.

Our centerfold is Don Srull's Heinkel He 112 B-1 redrawn as a peanut. The cover is recycled from a 1978 issue of Maxfax showing the He 112 in Spanish Nationalist markings for Our "Spanish Fly" event that Hurst Bowers promoted for aircraft use in the 1938 Spanish Civil War. We need to run that event again! Lots of great aircraft are eligible.

Al Fleischer has contributed a fine article on "How the Wright Brothers Did It". This came out of his research on making his model of the Wright Flyer. To continue in this

## JANICK MODEL ENGINEERING PLANS LIST

B-100 F-6-FLEET BIPLANE  
L-100 FAIRCHILD PT-19  
L-101 JODEL "D" 150  
L-102 BELLANCA CRUISAIR  
H-100 WITTMAN TAILWIND  
H-101 REED CLIPPED WING CUB  
H-102 REARWIN SPEEDSTER  
H-103 BABY ACE

theme we present some books published by fellow FACer Mike Markowski on flight experiments and attempts before the Wrights.

Finally, I have been bugged for plans for my stooge. So here it is. I will freely admit I swiped the design from Don Srull, but of course could not resist modifying it.

## The new Udvar-Hazy Center

*Dan Driscoll*

The Udvar-Hazy Center of the National Air and Space Museum (NASM) opened on December 15, 2003. This new center, near Dulles Airport in Virginia, will eventually house the aircraft from the Garber Facility at Silver Hill along with restoration areas.

I visited the center two days after it opened, and it is quite impressive. Although I had seen most of the aircraft during previous visits to The Garber Facility, the current display is like seeing them for the first time. The new center is huge and thanks to a series of walkways and balconies, most of the aircraft can be seen from below, at eye level, and from above. This allows photographing most of the collection from all angles.

There are about 80 aircraft representing all eras. Highlights include the "Enola Gay" displayed in one piece for the first time since the 1960's, and the space shuttle. I had, of course, seen many pictures of the space shuttle, but had not realized how gigantic it really is. It has to be seen to be appreciated. There is also a Concorde, which seems smaller than you would expect. My personal favorite is the almost diminutive Boeing FB-5 in USMC markings.

Admission is free, but parking is \$12.00, so car-pooling pays. Also, be prepared for delays entering the center due to extensive security with metal detectors and bag searches.

The center in its current state is a "must see", and the considerable empty space hints at what is to come.

## PHOTOS Page 2

1. The Heinkel 112 flies again --Dan Srull's from a 1978 MaxFax, as is his cover drawing of the Heinkel in Spanish markings for Our "Spanish Fly" event that Hurst promoted for aircraft use in the 1938 Spanish Civil War.
2. Our editor's 'Zippy', a nifty little sport rubber model. Plans in this issue.
3. Capt Pat and his 'Pete' beautifully crafted from the Dumas kit and a great realistic electric R/C flyer.
4. Jack Larsen sent this terrific photo of his Hansa-Brandenburg.
5. John Hunton's Typhoon ready to takeoff and intercept some V-1s over the homeland. John's little electric R/C soon to be a "Flying Models" plan.
6. How's this for a great diorama from Chris Starleaf -- his Drover being refueled in Fiji, one of my dream vacation locations.

## GRUMMAN FIGHTER SF-1

### 20 INCH WINGSPAN

Study carefully all details and observe all notations on plans before starting to build your plane. Follow instructions step by step, refer constant-ly to drawings and photos, and check parts carefully with plans from time to time. When cutting curved balsa parts such as bulkheads, wing tips, tail surface outlines, etc., always cut the inside curve first, as this helps to prevent the balsa from splitting. When pinning parts to the drawing never pint through the wood but place pins on each side.

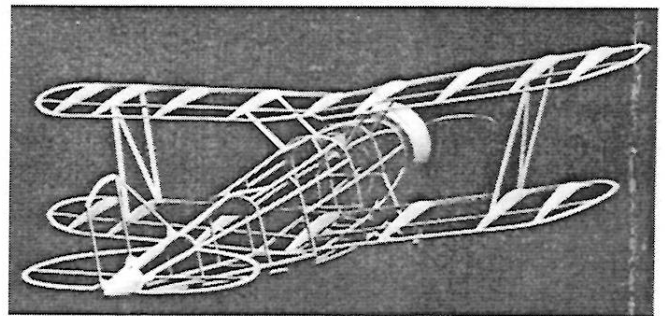
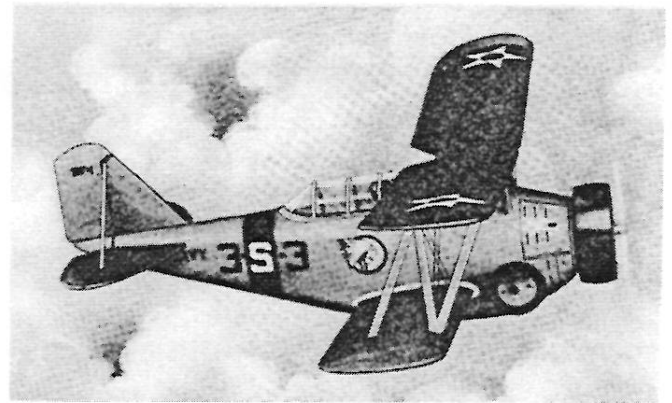
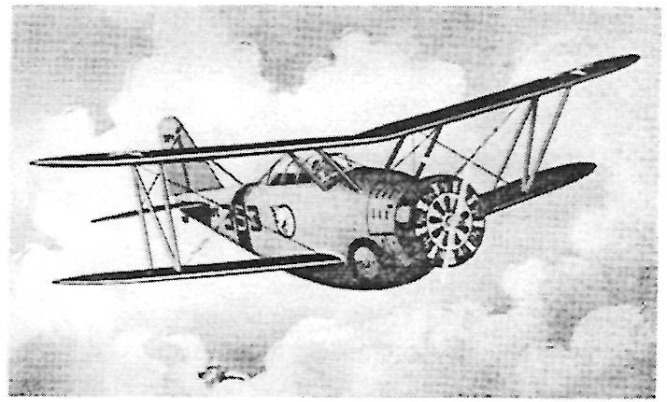
**Fuselage:** Place top and bottom 1/16" sq. balsa longerons on drawing the full length of fuselage (solid black lines only) holding in place with straight pins. Insert vertical pieces (solid black lines only) starting from rear of fuselage and up to within 7" of front bulkhead A. Make two sides of fuselage in this manner and when they are thoroughly dry join together by inserting bulkheads D, E, F, and G on top of fuselage and H, I, J, and K on bottom, locating these where the vertical pieces are. Now insert the large bulkhead C in place and put a 1/16" sq. balsa stringer in notch, between the two solid black lines as shown on plan and then glue in bulkhead A and B. All 1/16" sq. balsa stringers may now be inserted in place and glued well. There is a 1/8" sq. balsa brace across inside of fuselage (see fig. 1) to add strength where landing gear is glued. Insert rear hook. Cover the entire fuselage with white tissue, using banana oil as an adhesive. Cut out the printed motor from gummed sheet and glue to front of cowling. Balance of cowl is covered with red tissue. The Indian Head insignia is glued to left side of fuselage in position shown on plan. There is a band of red tissue around fuselage located back of windshield as shown on plan. Cut numerals from gummed paper and glue in place. Referring to Fig. 2, cut out the windshield, glue in place, and add black paper out-lines. The rear plug is carved out of a balsa block and hollowed. Cut out former L from 1/16" sheet balsa and glue a 3/8" sq. to it then insert a wire hook bending and gluing it at back. Glue this to rear plug.

**Wings & Tail Surfaces:** Build tail surfaces flat on drawing to insure proper shape and then cover with yellow tissue. Build wings on flat surface and cover all sides with yellow tissue. Glue two stars to top of upper wing and two to bottom of lower wing.

**Propeller:** The propeller supplied in the kit is very efficient and durable. Sandpaper propeller smooth. Insert propeller shaft in nose plug, then washers, then propeller, and bend to U shape. Apply a little glue on the end, then pull prop shaft back into the propeller.

**Assembling:** Glue tail surfaces to fuselage. Add center section struts and top wing. When dry glue on lower wing and outer wing struts. Insert propeller and rubber, using two loops of 1/8" flat rubber.

**Flying:** Hold model by center of wing tips. In this position it should balance as in normal flight. If it does not, add weight to front or rear, where necessary. Wind propeller 50 times for a trial flight. If the model nose dives, warp tail surfaces by breathing on them. If it climbs to steeply and then stalls and falls on its tail, warp in opposite directions. By adjusting the tail surfaces correctly the model will fly perfectly.



VS-3B SQUADRON INSIGNIA



Black – circle, headdress feathers  
Reddish Brown – face, headband  
Yellow – inside circle

**Scientific 20”  
Hi-Flyer  
Grumman  
Fighter SF-1**

*Dan Driscoll*

This issue's Scientific Hi-Flyer is the Grumman Fighter SF-1 (not really a fighter as explained below). The kit was introduced in 1935.

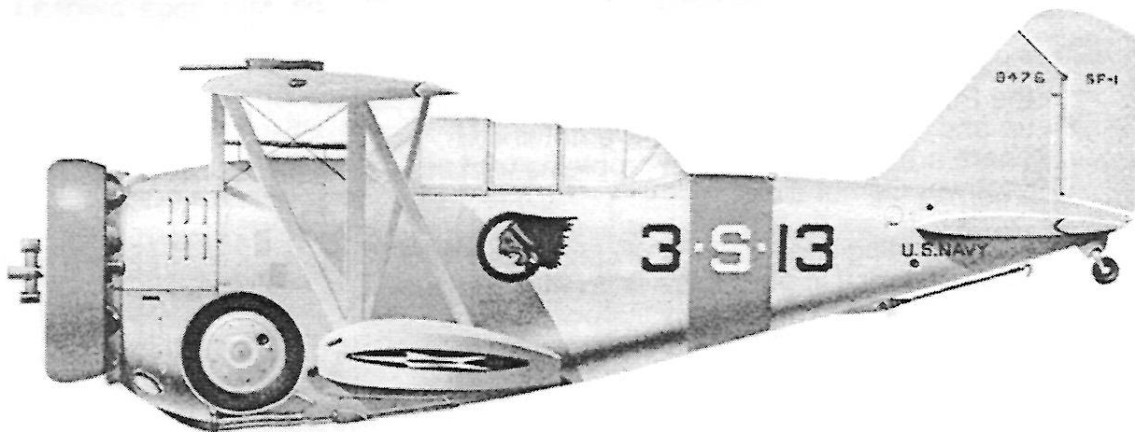
This is probably my favorite kit of the whole series, and is definitely on my ever-expanding to-build list.

The SF-1 was the scout version of the FF-1 fighter and entered service in 1934. The SF-1 had less armament and greater range. The major visible difference between the SF-1 and the FF-1 was the wider chord engine cowling on the SF-1. Only one active Navy squadron completely equipped with the SF-1, and that was VS-3B aboard the USS Lexington. Several other fighting and bombing squadrons received a single SF-1 for use as a liaison and utility aircraft. All were redistributed to Navy and Marine Corps reserve units by the end of 1936. All were withdrawn from duty by 1941.

Several foreign countries also used various versions of the FF-1/SF-1. The Spanish version saw combat during their civil war and lasted in service to the early 1950's. The Canadian version equipped an operational fighter squadron in 1941. All this and much more is covered in the Squadron/Signal publication Grumman Biplane Fighters in Action.

The profile of the SF-1 shows 3-S-13 (9476) of VS-3B. I came across conflicting information about the exact design and coloration of the squadron insignia, but what is shown should be sufficient for our purposes.

The model design, while not completely accurate, looks a lot like the SF-1. The tail surfaces would need some beefing up, and a one-piece stab would help. The one-piece lower wing is a plus, and the landing gear can be built in the retracted position for Old Time Kit Scale. However, the landing gear would have to be in the extended position for Golden Age Military Scale.



Chrome Yellow – top surface of upper wing  
Lemon Yellow – all tail surfaces  
Very Light Gray – fuselage, struts  
Silver – under surface of upper wing,  
both surfaces of lower wing  
Medium Green – cowl, fuselage stripe, chevron

NOTE: no U.S. NAVY on lower wing

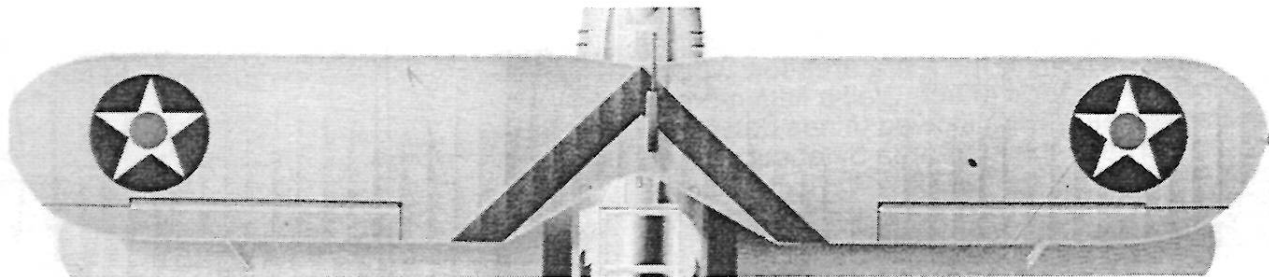
**We are still looking for the Hi-Flyer plans and patterns we don't have.**

**These are:**

**Vance Flying Wing,  
Nieuport Scout,  
Japanese Kawasaki Fighter,  
Boeing Fighter P-29,  
Monocoupe 90-A,  
Curtiss Helldiver (print wood patterns).**

**Please contact us if you can help.**

*Air Enthusiast* number nine on pages 26 to 39 has a great spread on "the Odd Saga of the First Grumman" which covers the FF-1, SF-1, XSF-2, and G-23 built by Canadian Car & Foundry. Color plates of many versions including the "Delfin" supplied to the Spanish Republicans. Yes, this is another Spanish Fly aircraft with color schemes for both sides. There is also a two page cutaway drawing.

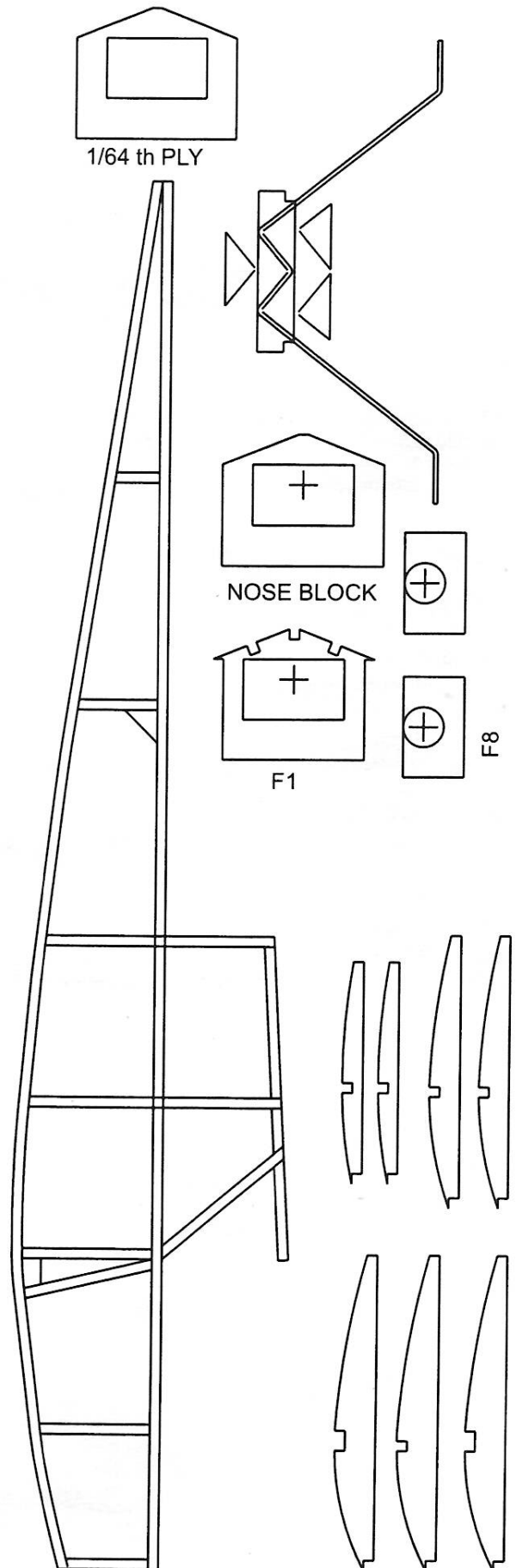


## ZIPPY

Claude Powell handed out the *Zippy* plans at the Petersburg deluge. I have cleaned them up and added the parts that are not shown. There are however several problems with this post war Comet dimer:

1. The landing gear mount is unclear. The 1/16th sq cross brace implies there is no wire support. The wheels are most likely supposed to be held on by a pin. A much better system is to use the .025 music wire shown and add an upright to the fuselage to support it. A balsa or paper fairing can be added to look like the original.
2. The wing and stab are set at zero incidence and decalage. Set F-4 at 3 degrees to cure this. Modify the fuselage uprights to suit. Adding staple wire pegs for a rubber band hold down beats gluing the wing on.
3. Formers F-1 and F-8 and a relatively high thrust line doesn't make thrust adjustment easy. Modified as shown with a 1/64th ply facing, it is stronger with more room for the rubber hook and thrust adjustments.
4. The cross pieces shown on the isometrics at the upper longerons interfere with the rubber motor. Eliminate them and add splices on the upright at their locations.
5. The rear motor peg at F-7 is too far aft and the fuselage is too constricted in this area. Move it forward to F-5.
6. The wing spar should be moved to the top of the rib to increase the bending stiffness.
7. Use an S-hook, clutch, and 4" prop with a peck thrust button. A NorthPacific "skeeter" prop would be ideal with a 15" loop of 1/16th rubber. Since I didn't have one, I used a 4" kaysun.
8. Use foam wheels not the 5/8" hard wood shown.

My version came out to be 8 grams, so I used a 15" loop of 3/32 Tan II. It flies fast- very "zippy". The first flights exhibited a slight dutch-roll. That slim rear fuselage I guess. I added the landing gear fairings hoping the extra area low would reduce the dihedral effect. Well a little more incidence in the wing slowed things down. I would increase the stab area by about 10% if I were to build it again. The plans show parts to build the original design. This page show the parts I modified per my comments above.



# 1903 REVISITED - HOW DID THE WRIGHT BROTHERS DO IT?

by Al Flesher

The year 2003 marks the 100th anniversary since the brothers Orville and Wilbur Wright made the first manned heavier-than-air powered flight. Having been alive through two-thirds of this period, I have witnessed a remarkable development in flying machines. We modelers owe a great debt to the Wrights because the pursuit of our hobby would not be possible without their pioneering efforts.

On December 17, 1903, the four flights by the Wrights were stunningly successful. The first try of few inventions performed as well as this first airplane. History has not reported these first flights in a way that revealed just how successful they were. For example, we know that the first of the four flights covered a distance of 120 feet and lasted 12 seconds. This is only the diameter of the typical control line model circle. But let's examine the telegram sent to their parents in Ohio:

SUCCESS FOUR FLIGHTS THURSDAY MORNING  
ALL AGAINST TWENTY ONE MILE WIND STARTED  
FROM LEVEL WITH ENGINE POWER ALONE AVERAGE  
SPEED THROUGH AIR THIRTY ONE MILES LONGEST 59  
SECONDS INFORM PRESS HOME CHRISTMAS.

From these facts we can calculate that, had the flight been made in calm air, the Wright Flyer would have traveled a distance of almost 500 feet on that first flight. Orville and (CONTINUED ON P 22) Wilbur wisely waited for a day with a brisk and steady wind so their plane did not need great ground speed to take off from the short launching monorail. The last flight piloted by Wilbur covered a distance of 852 feet. Against the 21 mph wind, this flight had an equivalent distance of a half mile! Not bad for an untried aircraft. After that day in December 1903, the Flyer never flew again with the same configuration.

What was it about the Wright Flyer that made it airworthy when so many others had failed? To start with, the Wrights approached the problem with systematic engineering methods. Starting in 1899, they built kites, then man carrying gliders. Their research involved a small wind tunnel which they used to evaluate various airfoil shapes. The Wright's advantage over other would be flyers came from their recognition of the problems that had to be solved.

In their studies of available literature, the Wrights understood the accepted views that a wing with dihedral provided lateral stability, a tail behind the wing would provide longitudinal stability, and that steering could be accomplished with a vertical rudder. It is puzzling that they rejected all three of these ideas. Gradually their "Flyer" took shape with many innovative design features.

Some of the lesser known:

The Flyer had an unusually low wing loading of 1.4 lb/sq. Ft.

The front canard wing had variable camber. When inclined upward, the airfoil had undercamber. When inclined downward, the airfoil had overcamber.

The right wing was longer than the left by 4 inches to account for the weight of the offset engine.

The propulsion system had two counter-rotating propellers so there would be no torque effect.

The rudder was coupled to the wing warping mechanism to provide for coordinated turns.

The Wright's propellers were the first properly designed with twisted blades to account for varying angle of attack along the radius.

These successful flights were possible only because the Wright brothers had piloting skills gained through considerable glider flying. What they did not realize is that the airplane they were flying was severely unstable in pitch. Through the last 100 years the 1903 Wright Flyer has been thoroughly scrutinized by many groups. The most recent testing program was sponsored by the American Institute of Aeronautics and Astronautics (AIAA). This program was conducted in March of 1999 and involved testing a full-scale replica of the Wright Flyer in the 40' x 80' wind tunnel at the Ames Research Center. This test revealed the following characteristics of the "Flyer":

All of the unique aerodynamic features incorporated by the Wright brothers worked as intended.

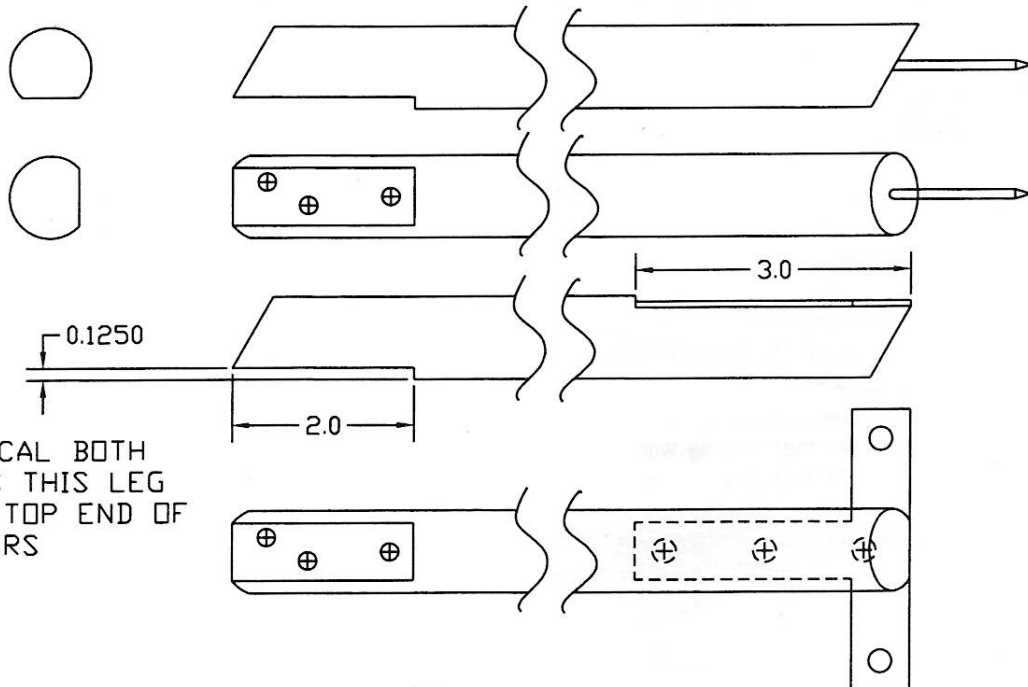
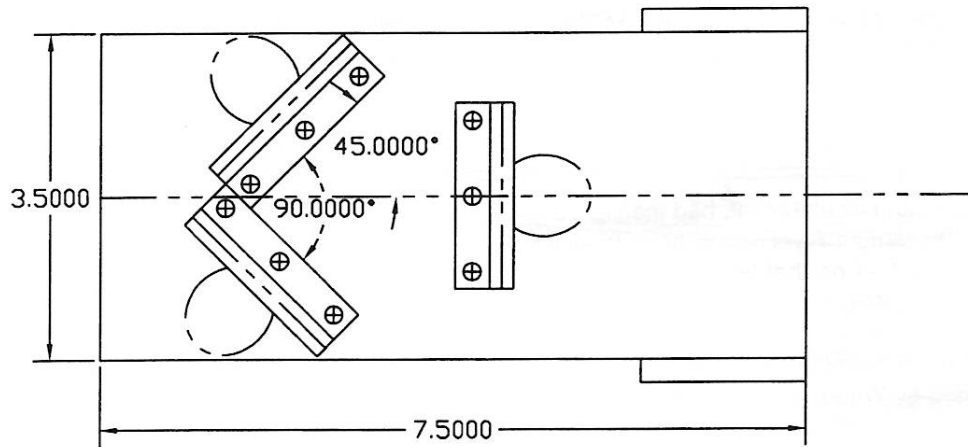
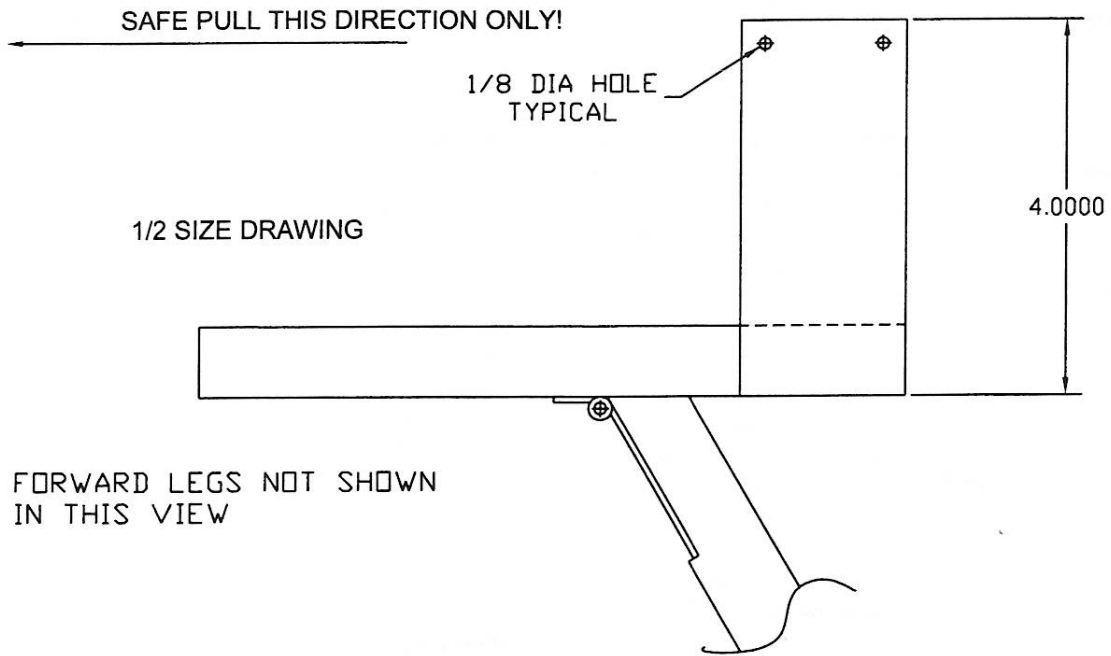
Pitching moment coefficient about the center of gravity at zero degrees angle-of-attack is -0.07 (nose down). This was caused by the undercambered airfoil.

There is a severe spiral mode instability due to the negative dihedral.

The Flyer has a very severe pitch instability with static margin = -25% of chord.

The last finding deserves explanation by interpretation of the aerodynamic jargon. Modern aerodynamic theory postulates that, for an aircraft to be stable in pitch, the center of gravity must be forward of the neutral point. This neutral point is defined as the longitudinal location on the aircraft where the pitching moment does not change with varying angles of attack. Unfortunately, the Wright brothers had no notion of this concept nor did they have a way to determine the neutral point. Hence they did not understand the significance of the center of gravity location. Their analysis of equilibrium included only the rectilinear forces acting on the aircraft: Lift, Weight, Thrust, and Drag.

(CONTINUED ON P 22)





## Making Stew's Stooge

### Materials:

three 7/8" dia. Hardwood Dowels 36" long  
 7" length of 1x4 pine  
 two 4" lengths of 1/4x2 pine  
 2 packs of 2" Light T Hinges (National N128-439)  
 1 pack of 3" x 3" T plates (National N113-704)  
 2 #12 nails 4" long

Bevel the ends of the dowels at 30 degrees parallel to each other. At one end of the dowels cut a 1/8" deep notch 2" long. Cut the heads off the nails and drill a hole centrally in the other end of two dowels just slightly smaller in diameter than the nails. Sharpen the cut end of the nails and drive them into the holes. They should stick out 2". On the other end of the third dowel cut a 1/8" notch 3" long opposite the 2" notch. Locate the long end of the T hinge in the 2" notch and drill 3/32" holes for the mounting screws supplied. Do this for all three dowels. Locate the long end of the T plate in the 3" notch and drill 1/8 inch holes to match the two upper most holes in it. The last hole is too close to the end to use. Screw the T plate in place. If you have screwed the hinges to the legs (dowels) to aid in locating the holes, unscrew them now.

Locate the short sides of the three hinges on the bottom of the 7" 1x4. It actually will measure 7 by 3.5 inches. The two forward hinges are not really symmetrical to the center line of the piece, but rather nested to allow them and the top of the legs to fit with in this width. Note they are both 45 degrees to the center line. The aft hinge is centered. Drill 3/32 pilot holes and mount the hinges. Now screw the legs to the hinges. The leg with the T plate is the aft leg.

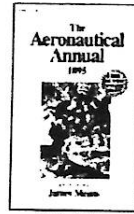
Drill the 1/8" pinning wire holes in the 4" length of 1/4x2. Note there are two holes in each close to the forward and aft edges. This will allow you to mount models with the rear peg close to either the wing or stab. Fasten the 1/4x2's in place with white glue and small nails.

To use the stooge swing the legs out until they rest on the bottom of the 1x4 and push the nails on the forward legs into the ground. Now spike the outer two holes of the T plate to the ground. I use two old Phillips screw drivers with 6" shanks. The holes will take anything up to a 1/4".

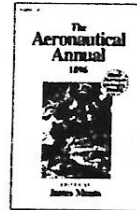
Note Well that the only safe pull is in the forward direction away from the staked rear leg. You can arrange hooks around the stooge to hold the pinning wire, winders, torque meters, winding tubes, etc. Put a bright flag on your pinning wires so you don't lose them.

Some people add a foam pad to support the model. This can be on a piece of 1/8th ply rubber banded in place to prevent it interfering with the stooge folded for transport.

**The Aeronautical Annuals of 1895-96-97 edited by James Means**  
**\$19.95 each or Set of all 3 Editions \$49.95 (Save almost \$10)**



1895 Edition  
204 pp.



1896 Edition  
192 pp.



1897 Edition  
216 pp.



The Aeronautical Annuals of 1895-96-97 contained the best collection of reprints from the work of the earlier experimenters in aviation... and I do not know of a better collection today. Your father showed rare good judgment in his selections, separating most of the good work from the mass of worthless matter which had been published. Your father's work was of great benefit to us, and I think of my personal acquaintance with him with affection."

—Orville Wright, in a letter to James Mean's son Philip, dated November 12, 1921

"The Aeronautical Annuals of 1895-96-97 are among the most important pre-Wright era aviation books ever published. Prized by collectors, original editions are extremely rare; a set can be worth \$3,000. In celebration of the First Flight Centennial, I am delighted to republish these treasures.

In 1899, the Smithsonian recommended the *Annuals* to Wilbur Wright when he wrote asking for information on human flight. These three volumes feature the plans, dreams, and schemes of some of aviation's greatest visionaries—De Vinci, Cayley, Henson, Langley, Maxim, Herring, Chanute, Lilienthal, and others.

The *Annuals* gave the Wrights a wealth of knowledge about the thinking and experiments which had been done up until that time—providing them with a foundation on which to formulate their own ideas. Each volume is packed with incredible information, drawings, and photographs, making them must reads for all aviation enthusiasts."

—Mike Markowski, aeronautical engineer, pilot, author, and publisher

**Birdflight as the Basis of Aviation**—An unabridged reproduction of Otto Lilienthal's landmark work, which established the foundation of aerodynamics and flying. Lilienthal was the first to methodically approach the problem of human flight, and the first experimental test pilot. When the Wright brothers read of his death in a gliding accident in August 1896, they got inspired to dedicate themselves to unraveling the mysteries of flight, and considered Otto their hero. Features over 100 fascinating drawings, graphs, and diagrams, and many historic photos of Lilienthal flying in the 1890s. 110 illus., 176 pp. \$19.95.

I read this book while visiting the Lilienthal's site on the Baltic. I found it very interesting. *Stew*

## ***Aeronautical Publishers***

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They thought that the center of gravity should be at the center of pressure of the wing and they incorrectly assumed the front canard contributed no lift, but served only as a control device. Contrary to this assumption, the AIAA wind tunnel test showed that, for trimmed flight, the canard would need a deflection of at least 6 degrees.

Consequently, Wilbur and Orville located the Flyer center of gravity at 30 percent of the wing chord. The wind tunnel testing showed that the neutral point for their canard aircraft lies four inches behind the wing leading edge or 0.05 of the wing chord. This explains why the static margin is stated as -25% of wing chord. Imagine flying one of your R/C ships with the center of gravity 25 percent behind where it should be. It would be a very exciting non-flight.

Of course, there is little the Wrights could have done to locate the center of gravity forward of the neutral point because almost the entire aircraft is behind its location. Installing sufficient nose ballast certainly would have rendered the aircraft unflyable. Thus, the Wrights simply had to cope with the serious pitch instabilities of their canard aircraft. Fortunately, due to the Flyer's low flying speed of 31 mph, its response to instability was slow and, as history has proven, flight was possible.

Experience with the 1903 Flyer led to a new design in 1905 which had a much longer nose and a reduction of static margin to -8%. Two years later their 1907 Flyer had an even longer nose and the static margin was reduced further to -5%. At this point the Wright brothers decided to abandon the canard configuration with its difficult-to-fly characteristics. Their next aircraft, Model B of 1910, had the complete tail aft of the wing in the so called "conventional" configuration. At last they had a stable airplane and the rest is history.

I hope each of us will find a way to celebrate the accomplishments of the brothers Wright in this centennial year of flight.

#### References:

Henry R. Jex, et al, 2000, "Full-Scale 1903 Wright Flyer Wind Tunnel Test Results From the NASA Ames Research Center", AIAA-2000-0512.

Jack Cherne, et al, 2000, "The AIAA 1903 Wright 'Flyer' Project Prior to Full-Scale Tests at NASA Ames Research Center", AIAA-2000-0511.

Fred E.C. Culick, 2001, "What the Wright Brothers Did and Did Not Understand About Flight Mechanics--In Modern Terms", AIAA-2001-3385.

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## PHOTOS Page 23

A Wright Flyer commemoration 100 years  
+ 4 days afterwards, 21 Dec 2003

7. The intrepid Wright team braving the elements at Shangri-la: Ralph Smalley, Al Flesher, Stew Meyers, Don Srull, Dan Driscoll, David Mitchell and in front, Ed Zapolski. There were also two witnesses: remember our friend Ed Escalante and also John Krouse; just like at Kitty Hawk 100 years ago.

8. Al Flesher ready to launch his reproduction of the 1903 Wright Flyer.

9. And here Al's flyer goes; both he and his flyer taking off in gale over the dunes at Shangri-la.

10. Al won the prize for the commemoration with a flight that lasted almost as long as the original one at Kittyhawk 100 years ago - Al seen here receiving his prize from Don with Stew and Dan looking on.

Photos by Tom Schmitt

## The Wright Stuff

On December 21, 2003, an intrepid group of Maxecuters assembled at COMSAT to commemorate the 100th anniversary of the Wright brothers' first manned flight. (Pictures are on page 23.) We had planned to hold this commemorative funfly the previous Sunday, but were deterred by snow and rain. Although this Sunday was bright and sunny with relatively mild temperature, the stiff wind made it uncomfortably cold.

Al Flesher had a very neat model of the Wright flyer powered by two rubber motors, and he got off one pretty good flight. This model had 22" blue form wings and weighed one oz. with out the 8" loops of 1/8" FAI powering each 5" bass wood prop. The rest of the crew had a varied collection of models and after everyone had a few test flights, we had one mass launch for the 100-year commemoration.

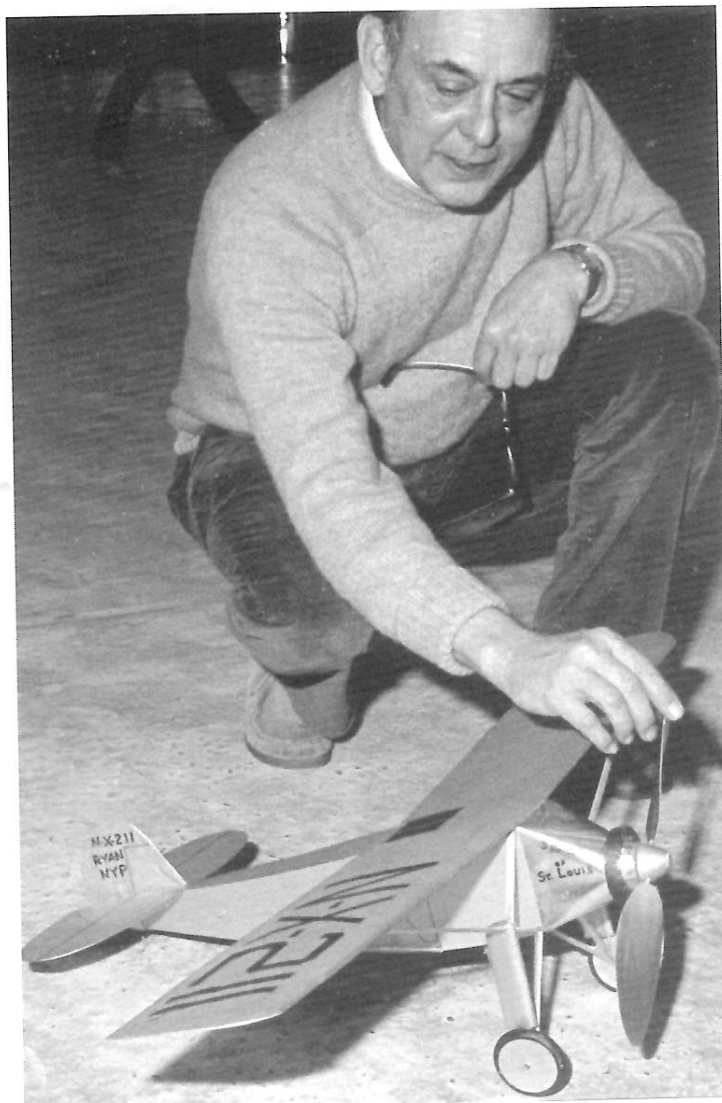
For a day with few flights, there were several casualties. Dave Mitchell put his Cessna 140 on the roof of the Post Office, but was able to get it back with minor damage. Ed Zapolski lost his Bostonian, and several other models suffered significant damage.

After about an hour, everybody had had enough, and we retired to Bob Evans for coffee, hot chocolate, food, and camaraderie.



The 'Wright Flyers' at Shangri-la 21 December 2003 celebrating the 100 anniversary of the first flight at Kittyhawk 100 years + 4 days later. Al Flesher won the prize with his successful Wright Flyer Flight across the windswept dunes.





Bud Carson and his Coconut "Spirit of St. Louis".

Bud was the father and originator of the FAC "Coconut" class of rubber powered scale model aircraft, and the "Spirit" was his first. Bud is now in an Assisted living facility and would enjoy hearing from his modeling friends.

His address is Bernard Carson, Sunrise at Severna Park,  
41 Mckinsey Road, Room 231, Severna Park, Maryland 21146  
Phone -- 410-421-5657

CLUB OFFICERS -President: Hurst Bowers, 1649 Birch Rd., Mclean, VA 22101  
Secretary: Bert Phillips, 1709 Crofton Pky, Crofton, MD 21111-2305  
Treasurer: Norm Davison, 14008 Castaway Dr., Rockville, MD 20853 Email --- nordav@juno.com  
Editor: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817

MEETINGS - The D.C. MAXECUTERS hold meetings at 8:00 pm on the first Tuesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

MEMBERSHIP - Dues for membership in the D.C. MAXECUTERS are \$15 per year for residents of the USA, Canada, and Mexico, and \$25 for all other countries.

Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box below is a reminder that your dues are due. Send a check, payable to the "D.C. MAXECUTERS", to the treasurer, Norm Davison.

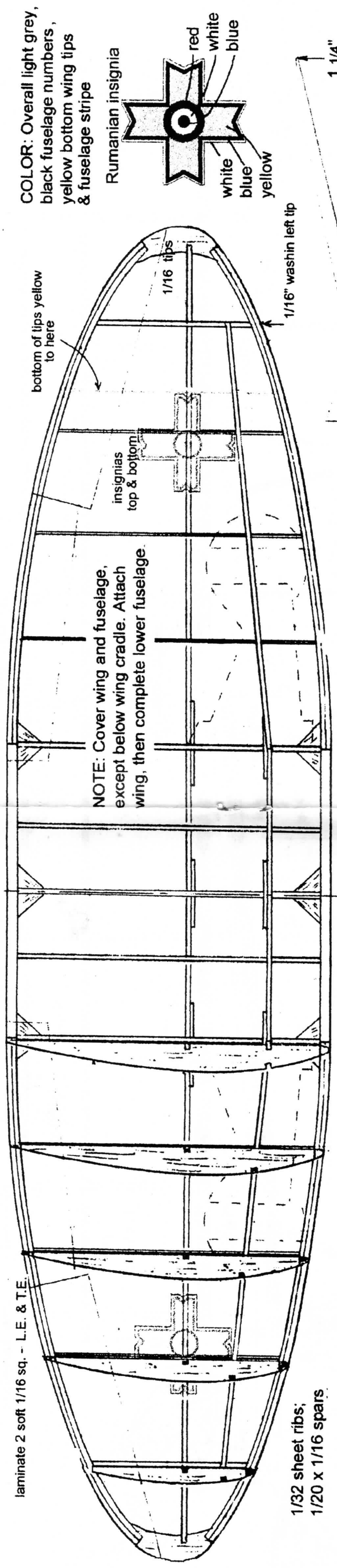
PUBLISHING DATES - Six issues of MaxFax are sent each year as close to the nominal dates as possible, but since this is a volunteer publication nothing is guaranteed except that six issues will be sent to all members.

CONTACTS - Material for the newsletter and membership questions should be addressed to Stew Meyers phone 301-365-1749. Email gets immediate attention. stew.meyers@erols.com

Maxecuter web site: [www.maxecuter.com](http://www.maxecuter.com)

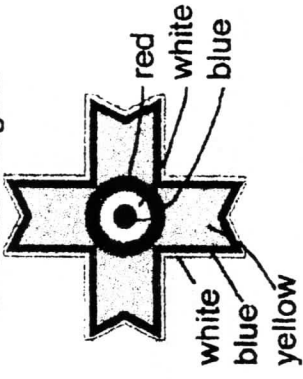
Your DUES are due





COLOR: Overall light grey, black fuselage numbers, yellow bottom wing tips & fuselage stripe

Rumanian insignia



1/32 sheet ribs;  
1/20 x 1/16 spars

NOTE: Cover wing and fuselage, except below wing cradle. Attach wing, then complete lower fuselage.

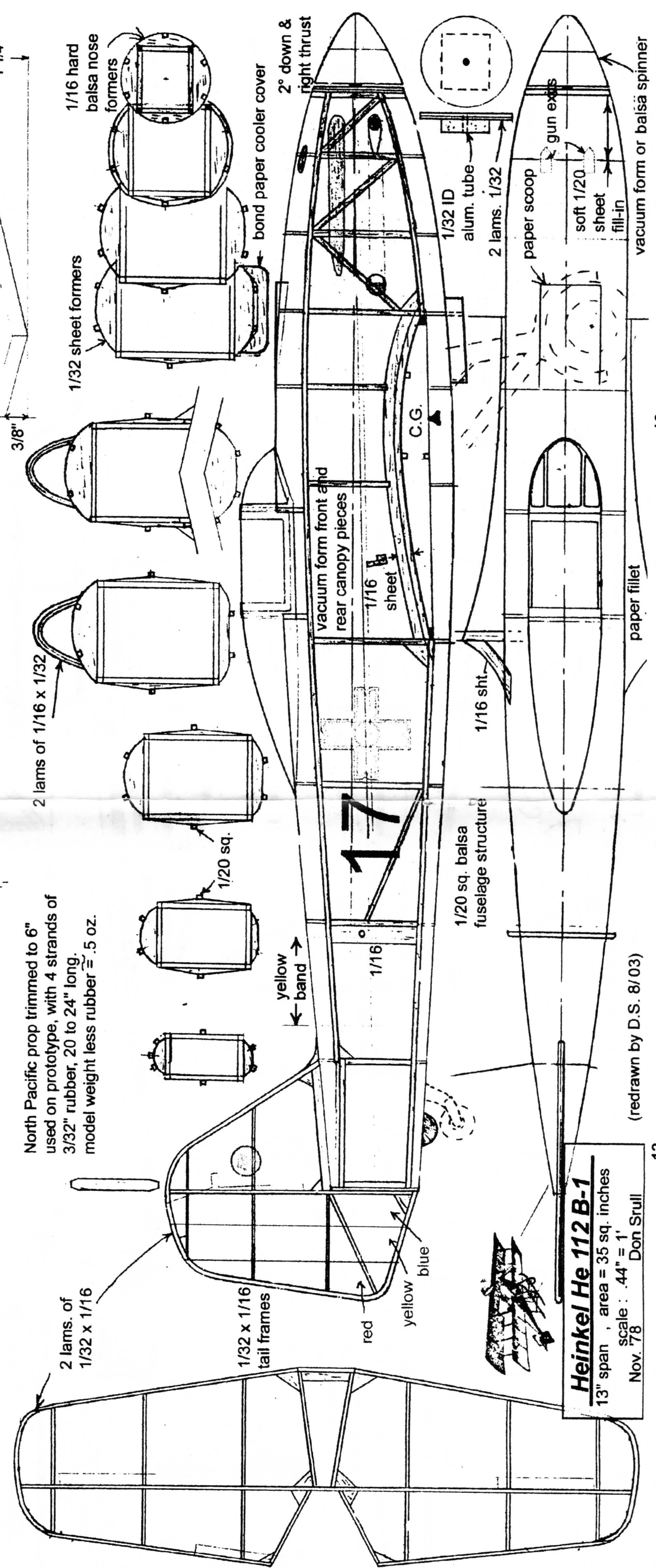
insignias  
top & bottom

bottom of tips yellow  
to here

1/16 tips

1/16" washin left tip

1 1/4"



North Pacific prop trimmed to 6" used on prototype, with 4 strands of 3/32" rubber, 20 to 24" long. model weight less rubber ≈ .5 oz.

2 lams. of  
1/32 x 1/16

1/32 x 1/16  
tail frames

yellow  
band

1/16

17

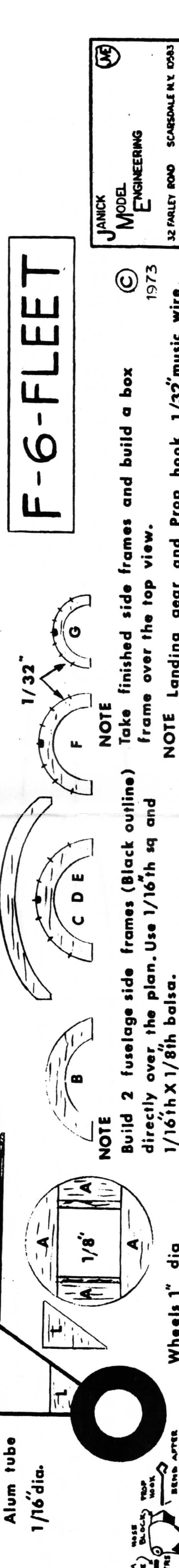
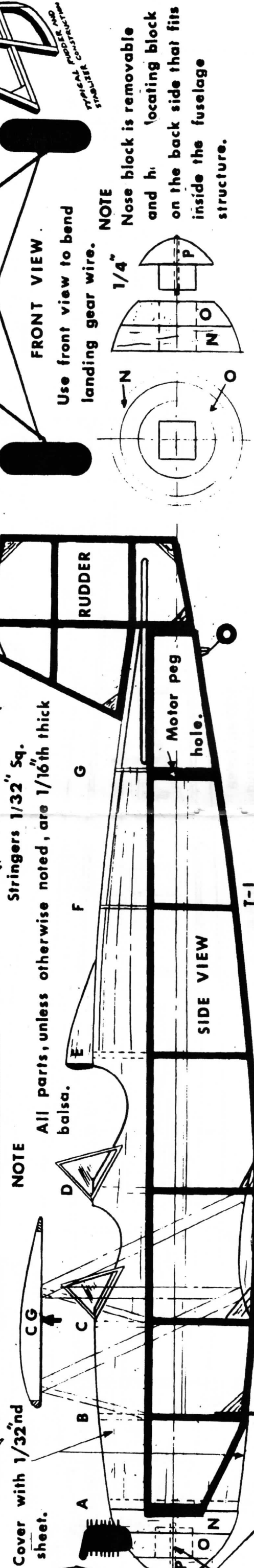
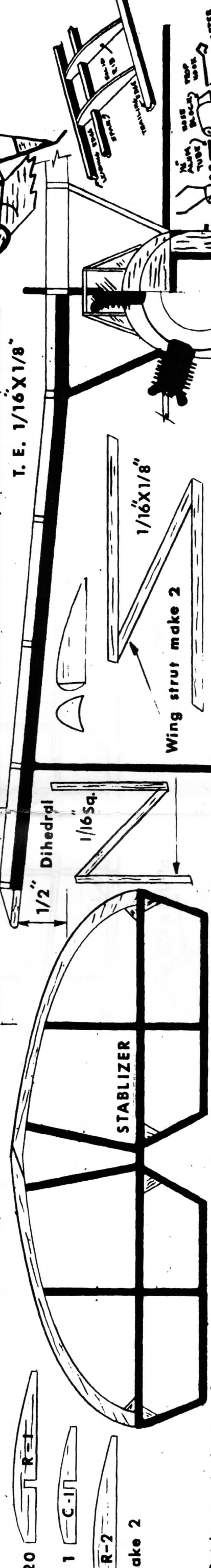
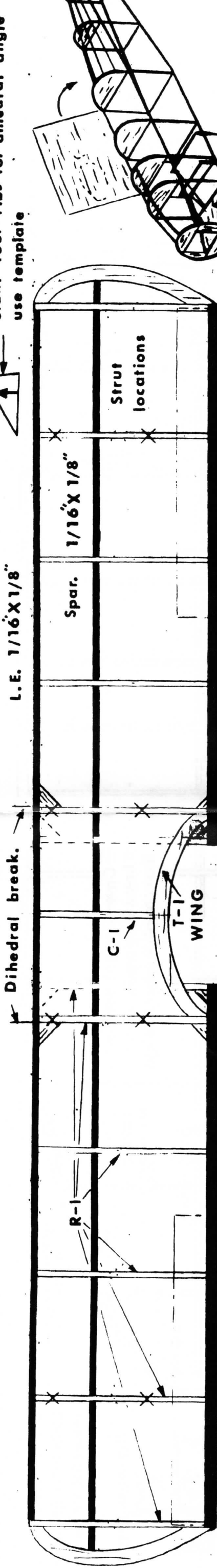
1/20 sq. balsa  
fuselage structure

1/16 sht.

(redrawn by D.S. 8/03)

**Heinkel He 112 B-1**  
 13" span, area = 35 sq. inches  
 scale: .44" = 1"  
 Nov. '78 Don Srull

Slant root ribs for dihedral angle use template



# F-6-FLEET

JANICK MODEL ENGINEERING  
 32 FARLEY ROAD SCARSDALE N.Y. 10983  
 PLAN # B-100

© 1973

NOTE  
 Build 2 fuselage side frames (Black outline) directly over the plan. Use 1/16th sq and 1/16th X 1/8th balsa.

NOTE  
 Take finished side frames and build a box frame over the top view.

NOTE  
 Landing gear and Prop hook 1/32" music wire.

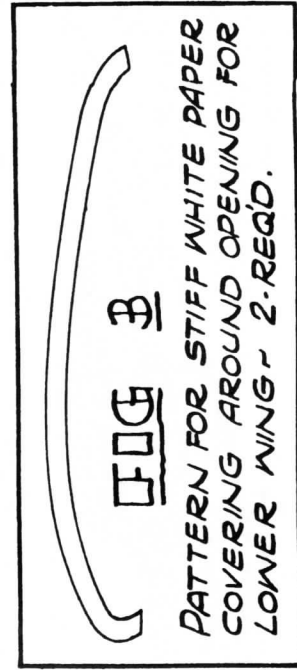
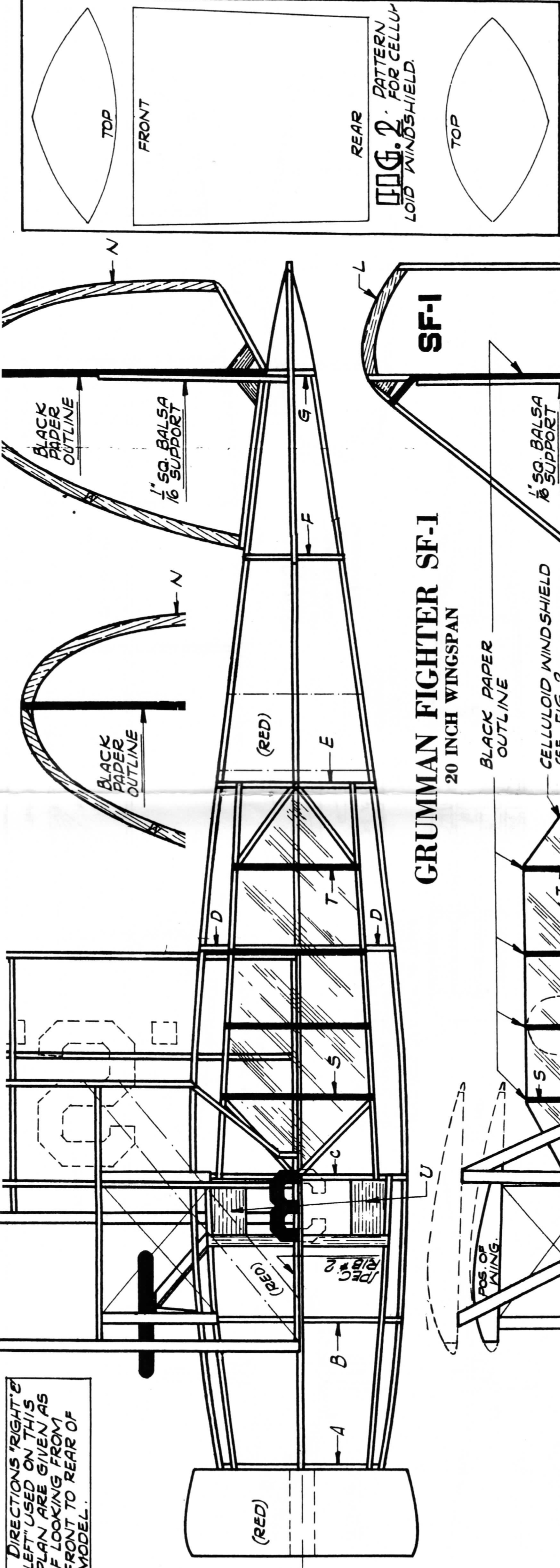
Wheels 1" dia  
 14







DIRECTIONS "RIGHT" & "LEFT" USED ON THIS PLAN ARE GIVEN AS IF LOOKING FROM FRONT TO REAR OF MODEL.



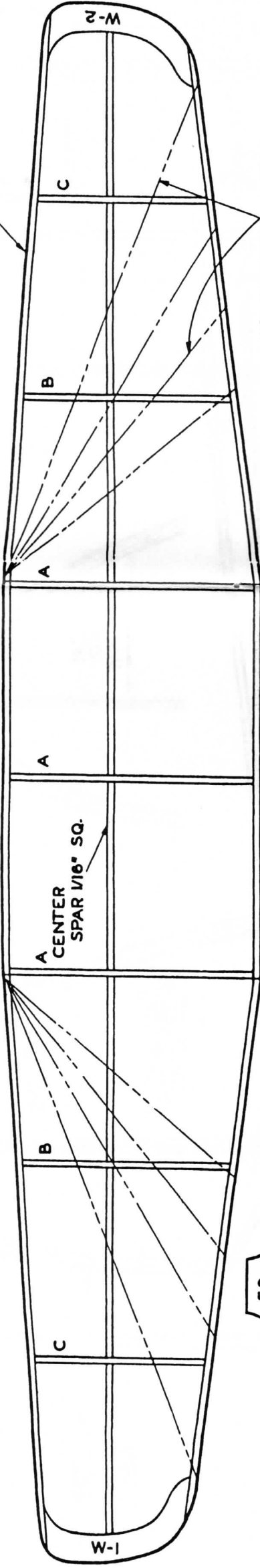
Use broken razor blade as shown for cutting ribs, bulkheads, etc.

1/8" SQ. ACROSS FUSE - 8 LAGE - SEE FIG. 1  
POS. OF INDIAN HEAD.

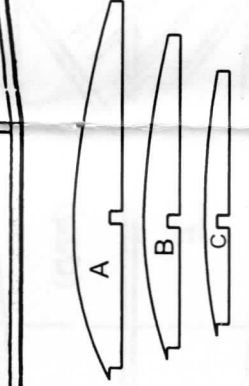
TRACE DESIGN STRIPES FROM PLAN ONTO TISSUE.  
CUT WITH SHARP RAZOR, THEN ATTACH TO WING.

NOTE: COLOR STRIPING IS OPTIONAL

LEADING EDGE 1/16" SQ.



1/16" SQ. CONSTRUCTION

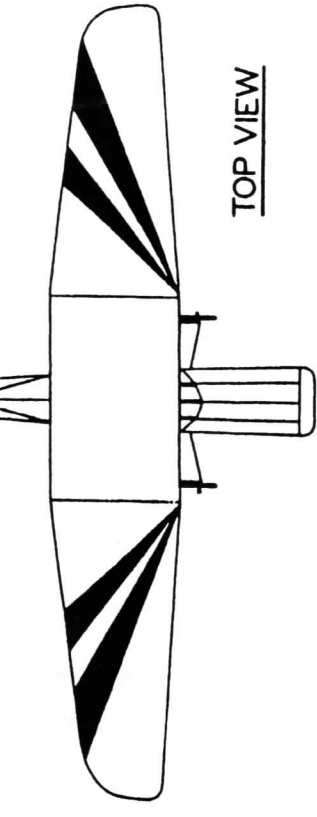


CABIN WINDOWS MAY BE COVERED WITH CELLOPHANE OR CELLOPHANE

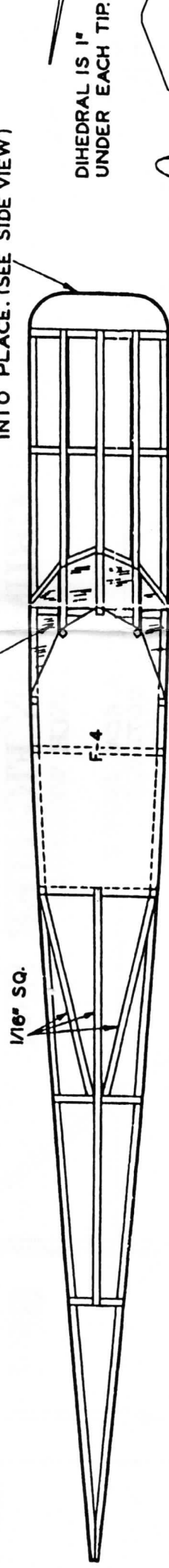
BUILD ELEVATOR DIRECTLY OVER PLAN. WHEN DRY TRIM OFF CORNERS WITH SANDPAPER.

COLOR STRIPE LINE (BLACK TISSUE)

CEMENT NOSE BLOCK LIGHTLY ONTO ASSEMBLED FUSELAGE, SAND TO SHAPE, REMOVE, AND GLUE Balsa NOSE PLATE F-8 INTO PLACE. (SEE SIDE VIEW)



TOP VIEW



DIHEDRAL IS 1" UNDER EACH TIP.

1/16" SQ.

ASSEMBLE RUDDER OVER PLAN

COMPLETED WING IS CEMENTED TO CABIN TOP FORMER F-4

NOSE BLOCK

F8

F1

F3

F-2

F-3

F5

F6

F-6

R3

R2

R1

SMALL BRASS WASHERS (OPTIONAL) BEAD

F-8

Balsa NOSE PLATE

NOSEPIECE IS REMOVABLE

F9,10

1/16" GUSSETS

FUSELAGE STRIPE LINE (BLACK TISSUE)

F2

F-8

NOSEPIECE IS REMOVABLE

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