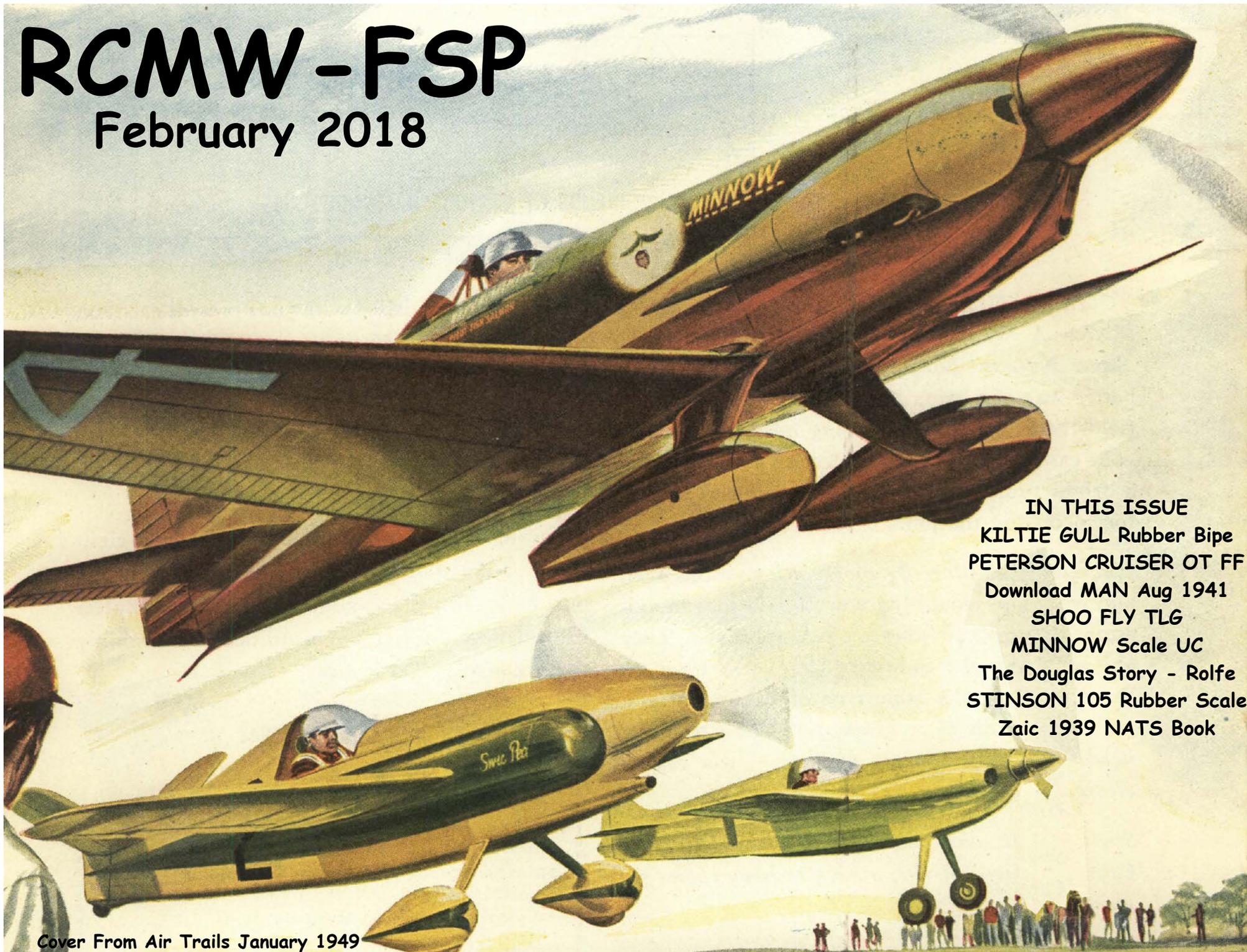


# RCMW-FSP

February 2018



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PETERSON CRUISER OT FF  
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Galesburg, IL 61401  
USA

# For the Model Bulder and Flyer - February 2018 Issue



Full  
Size  
Plans



Well now and again we run up against a problem, in this case two problems. My idea of moving a cartoon to the top of the home page and changing it every day ran into a technical difficulty. Not insurmountable but not worth the time to fix it right now.

The second problem was the reception of the SMILIN JACK movie and the HOP HARRIGAN radio program. Very few subscribers downloaded the files according to our records so we probably won't continue that project for now. We'll probably put the movies (we have quite a few) up on the DigitekBooks website for those who would like to have more.

So, back to our usual description of the contents of this issue. We have six plans for you this month including a two Tow Line Gliders, a Hal DeBolt designed UC Stunt Biplane, an attractive Old Timer Free Flight model, a nifty UC Scale model by Paul Plecan and a Modelcraft rubber scale kit plan of a Stinson lightplane.

The should pretty well cover the building urge for the winter time with a well rounded collection.

Our regular download of a complete digital back issue of a model magazine this month is the August 1941 issue of AIR TRAILS. It only takes a few minutes to download it and add it to your collection.

On the other hand, if you want to have complete collections of digital back issues check out the last three pages of this issue. Collections average under around 30 cents per issue compared \$5 to \$20 per issue on places like eBay. I'm not sure how they can get those prices. Maybe they don't sell.

We have also added another download feature to RCMW this month. Our archives include, in addition to extensive back issue magazine collections, a large number of model aviation and aviation related books and manuals. When I say a large number, I mean many hundreds and can't get any closer that that because I haven't had time to count them.

With that in mind, for this issue we have started with letting subscribers download one of the series of books published by Frank Zaic, in this case his photo review of the 1939 National Model Airplane Contest. You can download it by going to page 19 of this issue and clicking on the link provided.

There were also a lot of aviation adventure books printed, even before the Wright Brothers made their first successfull powered flight. Many Aviation adventure stories and biographies come from WWI and WWII as well. Many of them will appear as digital downloads for subscribers to RCMW.

Keep 'em Flying - Roland Friestad, Editor

# Resources

## AMPEER

by Editor



This chartered AMA club, started in 1996 and is promoted and maintained by Ken Myers has regular meetings that are published on the website. They are located in Commerce Township, Michigan (North and West of Detroit)

A regular monthly newsletter, the AMPEER is published and available by signing up at the website located at

[www.theampeer.org](http://www.theampeer.org)

If you scroll down you can click on and receive the current issue of the AMPEER in either PDF or HTML formats - They mention that the HTML format version has active links but I found that the PDF version also has active links. I prefer PDF myself because it is easier to access and store on my computer for future reference but that is just my own personal preference

If you click on the "Site Table of Contents" link you will be taken to a page with a large number of articles and projects related to electric power. You might want to do this when you don't have a lot of other projects that you are working on because there are many hours, or even days worth of reading there.

Of the many items on the Site Table of Contents, one of particular interest would be the "Complete Ampeer Index" which has all of the back issues of Ampeer in both PDF and HTML formats

Here's another great thing about the website, it has NONE of the obtrusive paid pop-up advertising that seems to dominate many other web pages - If you scroll down to the bottom of the home page you can see an explanation of this.

By the way, if you haven't already noticed, you will see that there are never any of those blasted pop-up ads on RCMW either and there never will be -

Also when you click on the "Site Table of Contents" you can choose another area that is crammed with all sorts of electric power related topics.

Of particular interest to me was the series of articles and comments on LIPO battery operation safety and disposal methods. I found

that if properly treated LIPO batteries that are no longer useful can be safely disposed in regular household waste, something that surprised me.

Editing and publishing RCMW and also SAM Speaks for the Society of Antique Modelers has kept me away from the building board far too long and I hope to fix that situation in the the oming months. We'll see if that works out or is just wishful thinking.

We plan to include a regular "Resources" article in each issue of RCMW. If any readers have suggestions for good websites or groups that you think should be brought to the attention of our other subscribers, just get in touch with me at

Roland Friestad  
[cardinal.eng@grics.net](mailto:cardinal.eng@grics.net)



# Kiltie Gull Biplane

This pretty little rubber powered biplane appeared first in the February 1939 issue of *FLYING ACES* and was later reprinted in the October 1984 issue of *MODEL BUILDER*. We would really like to have photos of your project if you build one.

By Henry "Scotty" Mayors

Here's a nifty, ace-high sky-scooter that's even better than the swell jobs good old "Scotty" Mayors has given us in the past. And best of all, it's so designed that all you newly-fledged "balsa brothers" can turn it out in full stride with our old time modelers. So clear off your workbenches, fellows-and go to it!

CLIMBING steeply after a smooth run, the Kiltie biplane soars skyward. Experimenting in high-lift wings, light construction, and glider-like design, the model offers fine characteristics insuring good flight performance.

Gull wings, single strut landing gear, "I" type wing struts, wheel pants, no external bracing, and a light wing loading, combine to make the Kiltie Gull a finely streamlined, modern plane.

The model is simply constructed, has a certain amount of flexibility, and can be finished in a wide assortment of colors and designs. You

can make your Kiltie Gull job with appropriate colors, insignia, and markings, or a sport model using bright scalloping effects, body striping, and numerals.

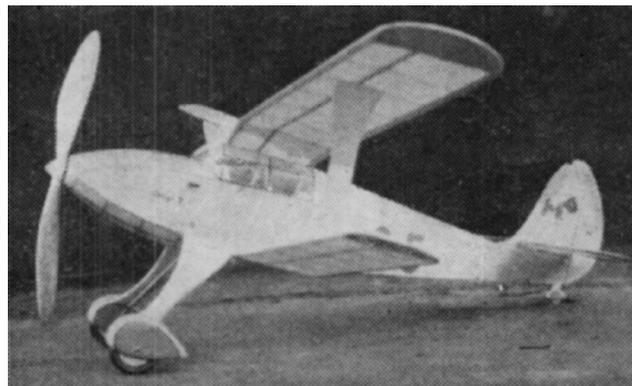
The propeller run (machine wound) is approximately 40 seconds, so you are assured of nice flights of about one minute in duration. The model climbs steeply, flies slowly, and has a long glide.

With the type of finish you choose in mind, let's proceed to our building.

Having used standard stock wood sizes, it will be quite easy to follow directions without having to fit odd sizes.

## FUSELAGE CONSTRUCTION

The fuselage is constructed of 3/32" square hard balsa. Two sides are built to the shape of the heavy outline. The longerons are cut to size, and the uprights are glued to them.



Now to join both sides we must install the crosspieces, which are shown in the top view. This gives the fuselage width. Cut each cross-piece carefully and glue it between the sides, making sure your fuselage is lined up symmetrically.

The noseblock, cut and sanded to shape from 1/4" flat balsa and hollowed out to allow for the nose plug, is now glued to the front end of the fuselage. The formers, numbered from 1 to 9, are cut to shape from 1/16" flat balsa and each is glued in its respective position. The flat pieces of 1/16" balsa are glued above and behind the landing gear leg as shown.

Stringers of 3/32" square hard balsa are glued from the noseblock to the cabin, and on the bottom aft to the projecting lower wing-mount on the box-like structure.

The top of the cabin has a stringer of 1/8" square balsa, which is also used as the upper wing mount. Running from the back of the cabin to the tail surfaces is a stringer of 1/8" by 1/16". This keeps the shape of the fuselage quite well. All other stringers are cut from 1/16" square balsa and glued in place.

Reed and balsa are used to form the windshield. The balsa, when cut correctly, is strong enough to support the windshield covering.

The rear plug for the wire hook consists of two laminated pieces of 1/16" flat balsa. Cut to shape and glue in position. It would be well to sandpaper the entire structure lightly, so that irregularities are eliminated.

Cut and bend the rear hook from medium size music wire. Insert it through the rear plug and glue solidly. Smear plenty of glue on the surrounding wood.

The landing gear legs, two of which are needed, are cut to shape from 1/8" flat balsa. Sand to a streamline shape, then put them aside. While using the 1/8" flat balsa, it would be advisable to cut out the six pieces needed for each of the pants. The centers are cut from four of the pieces to allow for wheel clearance.

Glue the six pieces and place a heavy object on them to insure lasting joints. While the glue in the second pant is setting, the first one may be cut to a streamline shape and sanded smooth. The operation is repeated when the second pant is ready. Pierce the pants to take the axle.

The landing gear legs should now be glued to the lower longerons just ahead of the lower wing mount. The pants may be glued to the legs of the landing gear before or after attachment to the fuselage. In either case, be sure of proper alignment.

But before filleting the attachments with glue, the wire bridge for the landing gear should be cut and bent to shape. It runs continuously from the outside of one pant, through the pant and wheel, up the inside of the leg, through the fuselage to the other leg, down that leg, and out through the other pant. Most wire pieces are easily shaped from No. 12 wire, so use that throughout. A washer or eyelet may be placed in the pants where the wire bridge axle pierces them.

Incidentally, where wire and wood meet, it is best to make a small fillet of glue for strength and neatness. Here, glue should always be shaped while still in a putty-like condition.

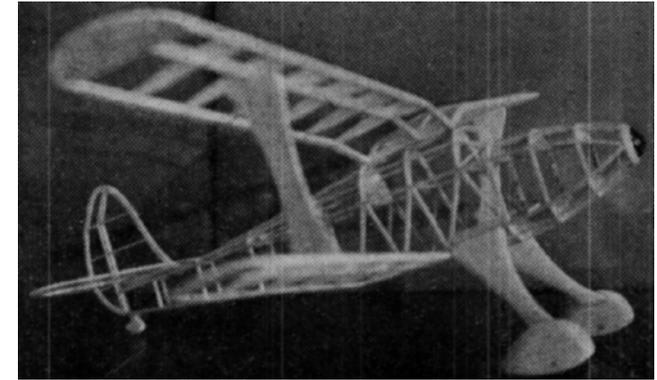
The wheels are 1-3/8" diameter. They are of hard wood and should be quite heavy. This adds stability, due to a lowered center of gravity.

The tail wheel fairing is cut from two pieces of 1/8" flat balsa. The center should be scooped out to allow for the wheel, which is approximately 3/8" in diameter. Glue the sides and sand to shape as shown. Glue this unit to the extreme rear of the fuselage, on the lower longerons.

It is advisable to construct the tail surfaces at this phase of building. The fin and rudder unit is formed of ribs cut from 1/16" flat balsa. Glue the ribs to the leading and trailing edges, as indicated, and to the spars running vertically in the middle. Connect the rudder to the fin by small wire Hinges.

Block "A," the base for the stabilizer, is cut to the width of the lower fin rib. It is mounted directly onto the fin, and the entire structure is glued solidly to the fuselage.

The stabilizer is built of 3/32" square balsa. Gussets, cut from 1/16" flat balsa, are glued in position. Tips of 1/16" flat balsa are now glued to the 3/32" square structure. Before cutting the flat pieces that complete it, the stabilizer should be mounted in the fin directly on top of the base provided. It is glued solidly, and here again make sure of perfect alignment.



Now complete the stabilizer by gluing the flat pieces that make up the trailing edge. The grain allows the use of these pieces as elevators, due to the fact that they may be warped for control. Now sand the entire structure to a smooth streamlined shape.

## THE WINGS AND PROP

The top wing is constructed of sixteen ribs cut from 1/16" flat balsa, a leading edge shaped to the nose of the rib from 1/4" square, a spar 1/8" by 1/4" running through the middle, and a trailing edge of 1/8" by 1/4" shaped as shown. Wingtips of 1/16" flat balsa are cut and shaped. Glue in position and taper the wing spar into the wingtip.

To create the gull unit, I found it advisable to crack the spar, leading, and trailing edges at the middle section where the trailing edge curves in, and at the first rib out from the middle. The two middle ribs may be left out until after the gull has been set. Both ribs have to be shortened slightly.

After cracking, glue is spread thickly along the cracks until there is no tendency toward further breaking. Sand the entire structure so that no roughness remains. Be sure you have the correct dihedral of 2" before you allow the glue to set throughly.

Both a right and left bottom wing are required. Ribs are cut from 1/16" flat balsa and are glued to the leading edge (which is of 1/8" sq. balsa) and the trailing edge (which is of 1/16" by 3/16" balsa). A spar 1/16" by 3/16" is glued in position as shown. Wingtips are cut from 1/16" flat stock and glued in position.

Small gussets are placed in the bottom wings at the tip, and at the joint formed by the trailing edge and butt rib. This butt rib is cracked and bent to touch the trailing edge and the second rib from the butt. Sand the wings to a smooth finish.

Cut two "I" wing struts from 1/16" flat balsa and sand to a streamlined shape. Put the struts aside until the wings are rigged.

The propeller is cut from a block 8-1/2" by 1-1/2" by 1" hard balsa. The original model used a larger prop; but this one is better, since less adjustment for torque is necessary. Carve the prop carefully, keeping the blade section quite thick. The spinner may be carved as part of the propeller, or it may be left off entirely, in which case a free wheeling device can be easily attached.

When using a prop without a spinner, carve a round piece of wood to finish the streamlining at the noseblock, as illustrated in the skeleton photograph. This is optional, and is not included in the plans.

The hardwood plug shown may be purchased from your local model shop. In the event you use a plug of different size, you merely have to cut the inside of the noseblock to the same size as the outside diameter of your plug.

## COVERING

Having constructed all the wood parts and having assembled the tail surfaces, the fuselage and tail surfaces should be covered. Tissue for the fuselage and tail surfaces is cut into strips, the largest possible being used. Banana oil is used to fasten the tissue to the balsa.

The wings should be covered next. Using banana oil, coat the middle rib only and work the paper toward the wingtips, fastening the paper only to the leading and trailing edges and the wingtip rib. Use a separate piece of paper to cover the wingtip. It is preferable to have the grain in the paper run from wingtip to wingtip.

The cabin of the model is covered with cellophane, glue being used to attach it to the wood. The windshield is formed from cellophane by the "cut and try" method. Paint the formers of the windshield and cabin with black paint or India ink.

In attaching the top wing, it is best to lay the wing, with the bottom side up, on a flat surface. Scrape the paper from the bottom of the middle ribs and coat with glue. Take the fuselage and coat the top of the cabin with glue. Now press the fuselage down lightly onto the wing, holding the entire structure until the glue is almost set. Then turn the model right side up and prop the wings with books or any other handy objects to insure perfect alignment of wings and body.

Take away these props when the glue has hardened, then glue the bottom wings to the boxlike structure. One wing is glued at a time and propped up to the proper dihedral with books the same as the top wing.

The gap between wings, measured from leading edge of the top wing to leading edge of the bottom wing, is exactly four inches. Incidence in the top wing is present, due to the shape of the cabin. Incidence in the bottom wing should be noted on the plans and set accordingly.

Coming back to the "I" struts, you will find that the top of the strut fits the bottom curvature of the top wing, and the bottom of the strut fits the top curvature of the bottom wing. On the ribs upon which the strut is glued, the paper is scraped off and the bare wood is exposed.

Glue the struts in their respective positions. The leading edge of the strut is located 1/2" in from the leading edge of the top wing and 3/8" in from the leading edge of the bottom wing. Use an excessive amount of glue, and keep your wings perfectly aligned.

A wire shaft is glued through the center of the prop spinner. Slip a few washers on the shaft, then slide it through the noseplug and bend to shape for the rubber motor.

## FINISH

The original model is all yellow with wood parts painted silver, using yellow scallops and black outline. All wood parts are sanded and doped to a clear, smooth surface before being painted. The paper is sprayed with water to tighten it, and when dry it should be sprayed or brushed with two coats of plain dope.

License numbers and lettering should be used to decorate the model. India ink may be used for detailing. The pitotstatic tube and venturi tube can be shaped from the reed. These items are cut to size, painted black, and glued in position. The venturi tube is glued on the upright between top and bottom former No. 3; the pitot-static tube is glued to the left wing strut approximately 1-3/4" down from the top. And now we're set for-



Control of the glide is affected by the trailing edge pieces of the stabilizer. The grain of the wood, running lengthwise, permits their being warped up or down to control diving or stalling tendencies.

After having secured the desired glide, wind the prop 150 turns by hand, place the model on a flat surface, and give it a gentle shove, releasing the prop at the same time. The model

should climb steeply, turning gently with the torque (to the left looking from the rear) and slowly glide in to a landing.

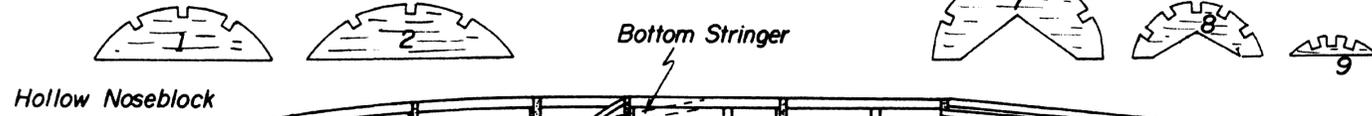
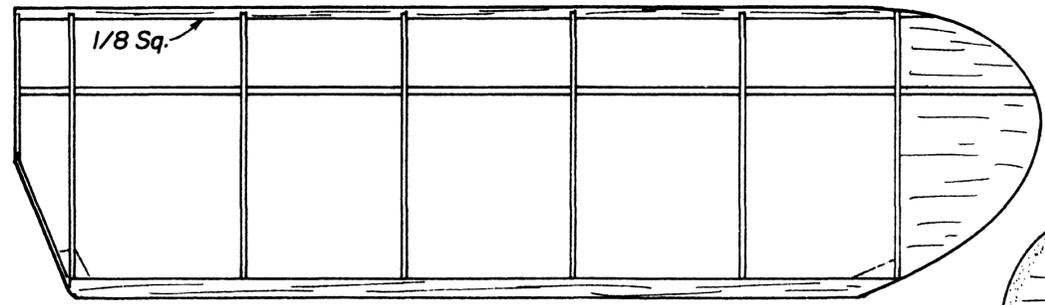
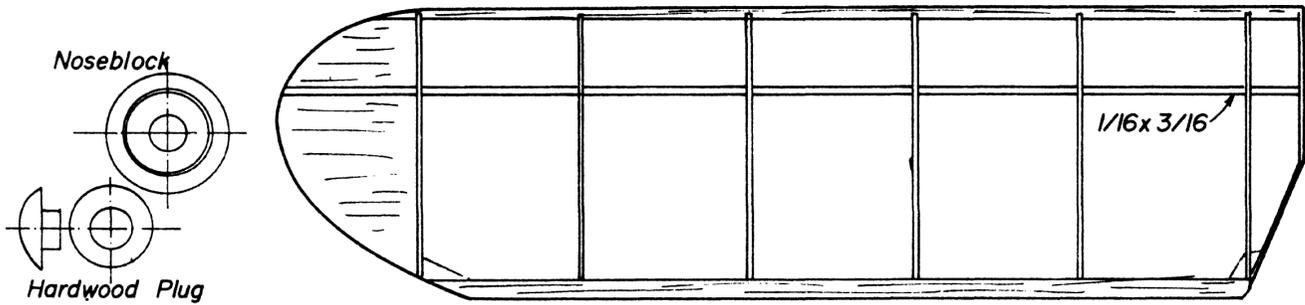
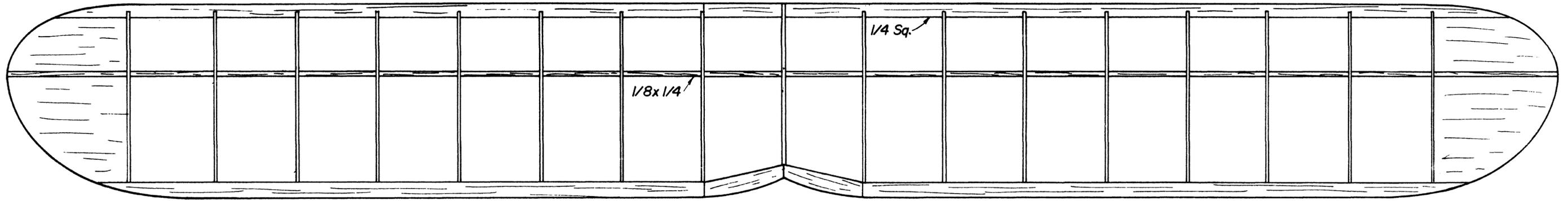
Control of turning may be had by the use of the rudder, which I found to be quite sensitive to change. Control of climbing or diving with power should be through use of an off-center thrustline, usually a negative thrust. It is a poor practice to use weights to balance the model, as dead weight does not contribute to lift and is a poor substitute for balance.

For duration flights the rubber may be wound .600 turns by a winder and launched into the wind. It is foolish to fly any type model on a windy day, especially one as light as this biplane. Wait for a calm day--and you'll be well rewarded for your time and labor.

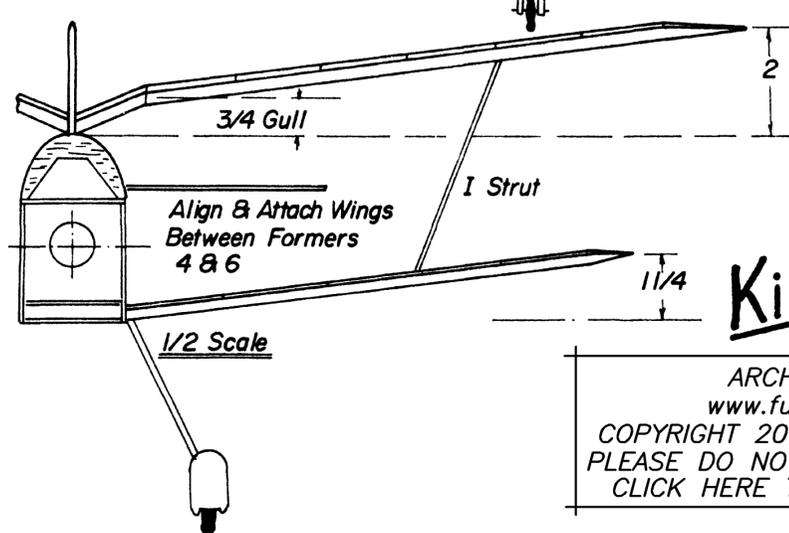
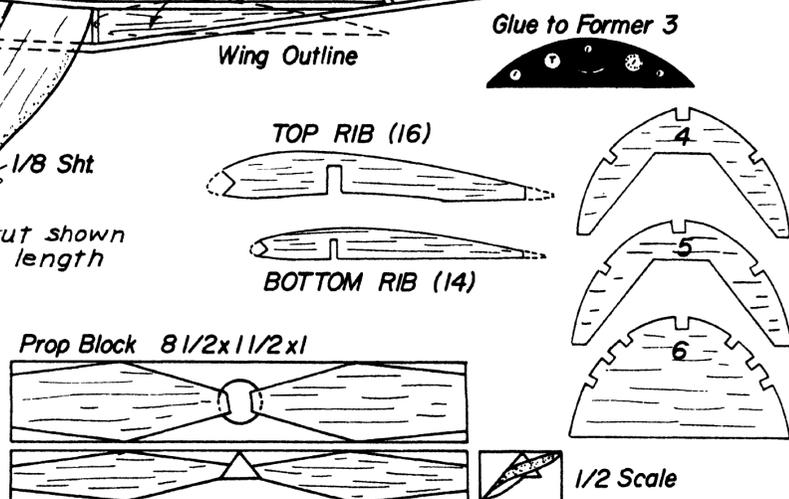
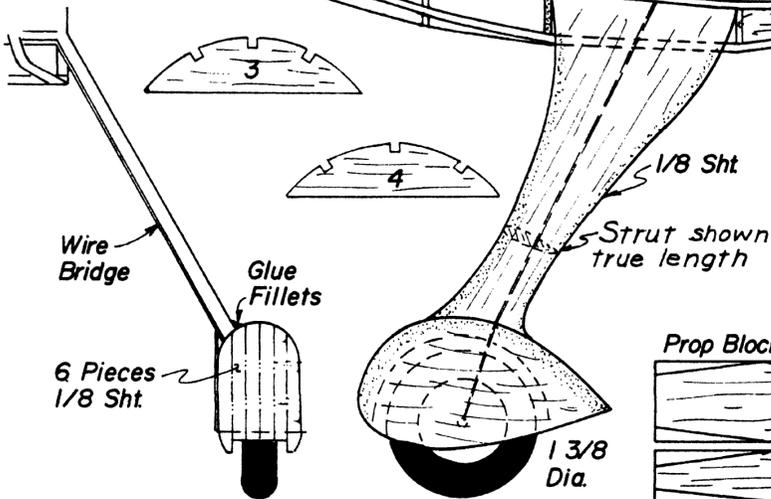
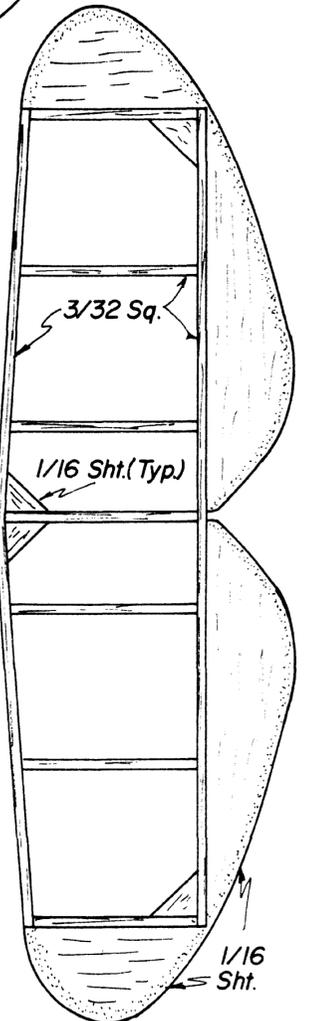
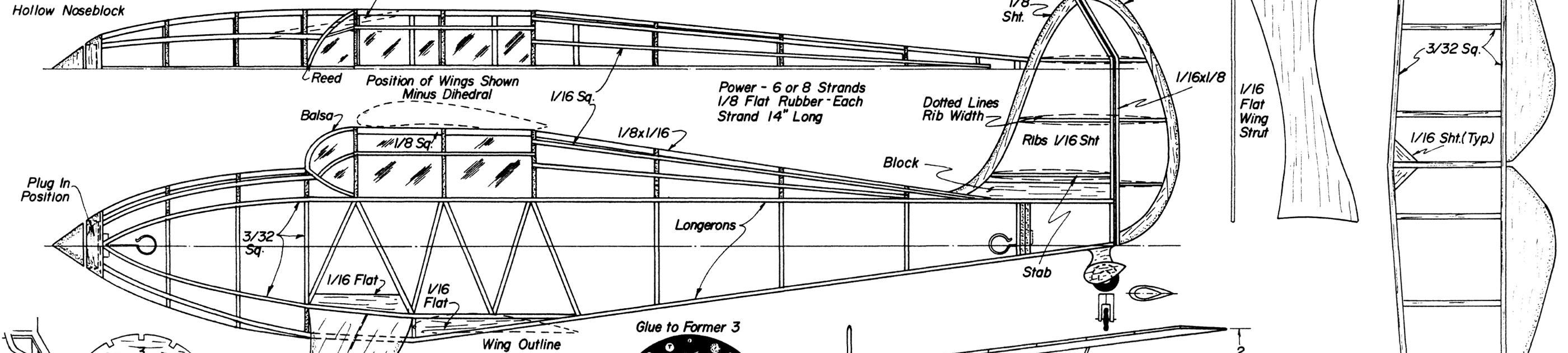
## FLYING THE MODEL

Loop the six-strand rubber motor between the rear hook and an "S" hook, and attach the "S" hook to the prop shaft. This permits the use of a winder. In flying, the model should first be launched shoulder high (without power) to check the glide. It should descend at a constant angle, landing on the front wheels while still in the gliding position.





All Formers Are 1/16 Flat Balsa Note Positions. The Noseblock Is 1/4 Flat.....



**Kiltie Gull**  
By "SCOTTY" MAYORS

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CLICK HERE TO GO TO THE WEBSITE

# FIXIT WRIGHT

by BRUCE WENNERSTROM

WE'VE GOT TO DO SOMETHING ABOUT THESE SMALL FIELDS TAILSKID!

HOW 'BOUT PUTTING FLOATS ON THESE CRATES AND FLYING 'EM R.O.W.?

FOR ONCE TAILSKID, YOU'VE USED YOUR BRAIN—ONLY, YOU KNOW.....THERE'S A LOT MORE TO AN R.O.W. CONVERSION THAN JUST ADDING FLOATS/ LIKE DOPING THE EXPOSED FRAMEWORK AND.....

MR. WRIGHT PULEESE! YOU'RE TALKING TO THE OLD MASTER HIMSELF! SEE YOU TONIGHT.

THAT EVENING

WELL, FIXIT, WHAT DO YOU THINK OF THE OL' SHIP WITH FLOATS ON?

TAILSKID YOU AMAZE ME! WHY YOU EVEN THOUGHT TO ADD A SUB-RUDDER.....AND A HOOK ON THE FLOATS!

TAILSKID'S FLOATS SHOWING HOOK

HELPS TAKEOFF CONSIDERABLY, WHILE A SUB-RUDDER MUST USUALLY BE ADDED TO A MODEL NOT ORIGINALLY DESIGNED AS A SEA PLANE TO COMPENSATE FOR THE ADDED FLOATS

BY THE WAY, TAILSKID, DID YOU REMEMBER TO WATERPROOF YOUR IGNITION? A DIP IN WARM PARAFFIN WILL KEEP YOUR HOOKUP DRY IN CASE OF A DUNKING!

FIXIT, THIS JOB ISN'T GOING TO DUNK! I'LL SEE YA IN THE MORNING

WHAT A DAY! NOT A CLOUD, NOT A BREEZE!

...AND NO TREES! FIXIT, THIS JOB'S GONNA GO UP LIKE A HOMSICK ANGEL!

SAY, CHUM, DID YOU THINK TO CHECK THE GLIDE OF YOUR CRATE IN SOME TALL GRASS THIS MORNING?

I KNOW, BUT SOMETIMES ADJUSTMENTS ARE NEEDED AFTER YOU'VE ADDED FLOATS.

WHAT FOR? IT FLEW SWELL WITH WHEELS

HAH! JUST YOU KEEP YOUR EYES PEELLED BOY, AND SEE THIS TAKEOFF

WELL, WILL YOU LOOK AT THAT! A PERFECT TAKE-OFF!

GOSH, FIXIT, I'M MORE SURPRISED THAN YOU ARE!

WELL, MR. WRIGHT, WHAT DID YOU THINK OF THAT FLIGHT? BETTER THAN 2 MINUTES I'LL BET!

FINE, EXCEPT YOUR GLIDE WAS A LITTLE STEEP. THAT'S WHY SHE DUNKED WHEN SHE LANDED. IF YOU MUST DRAG YOUR FEET, TAILSKID, HOW ABOUT GIVING US SOME LEFT RUDDER?

HEY, FIXIT, SHE WON'T START! I CAN'T GET ANY SPARK!

I DON'T WANT TO BE AN "I-TOLD-YOU-SO" BUT I WARNED YOU TO WATER-PROOF YOUR IGNITION. NOW WATCH MY BABY PERFORM!

BOY, SHE'S SCREAMING NOW! WAIT! L'L OLD TAILSKID SEES THIS TAKEOFF.

FIXIT! FIXIT! WAIT!

OH MY GOSH! I TRIED TO WARN YOU, BUT YOU DIDN'T HEAR

AND I'M HEADED RIGHT FOR IT!

R-R-R-R-R-R-R

# CRASH!

MY GOSH! THE WHOLE NOSE WAS TORN OFF! I'LL HAVE TO FISH FOR THAT ENGINE WITH A NET.

OLD SHOES, TIN CANS, AND NOW THIS!

HEY, FIXIT, LET'S SEE YOUR JOB MAKE LIKE AN ASSAULT BOAT AGAIN! HA, HA!

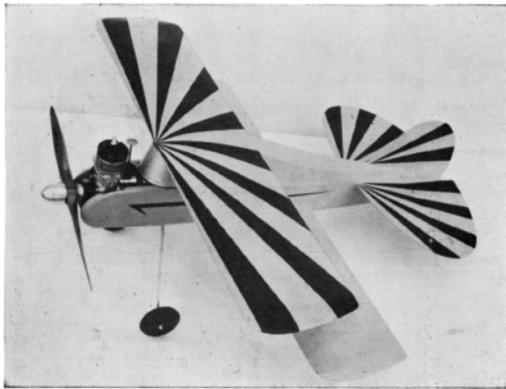
JUST ROW, FRIEND, JUST ROW!

MORAL: THE HUMAN ELEMENT IS ABLE TO SNAFU EVEN THE BEST OF MODELS. ESTABLISH A REGULAR MENTAL CHECK LIST FOR LAUNCHING TO AVOID FOUL UPS LIKE FIXIT'S!

WENNERSTROM

The  
"New BIPE"

*A Trainer for the Beginner,  
A Superior Stunt Model  
for the Expert!*



*Instructions  
for Building and Flying*

THE deBOLT MODEL ENGINEERING CO.  
WILLIAMSVILLE 21, N. Y.

*"Home of Design-Engineered Models"*

This was one of the early (1948) DeBolt Model Engineering kits by the late Hal DeBolt. Later on most of his kits were radio controlled and sold under the DMECO name. Following are the instructions from the kit.

#### FOREWORD:

For years now the dmeco "Bipe" has been one of the most widely accepted trainers and stunt models that the American hobbyist has had the pleasure of flying.

However as time goes on advancements are made and improvements can help even the finest of equipment, thus the "old Bipe" has had its share. In the "new Bipe" you have the very latest in design, construction and flying ability; the design has been altered so that it now performs equally well inverted or upright, the construction has been simplified and strengthened with less over all weight and then too a bit more attention has been paid to its appearance so that it now presents a much more pleasing look to the eye. All in all it is believed that even as great as the "old Bipe" was the new one is even greater!

For power it is suggested that you use any engine from .23 to .49 displacement, although it is possible to use larger engines with some sacrifice in performance.

With the smaller engines the glow plug or diesel type should be used if you wish contest type flying ability, however for training and sport ignition is perfectly acceptable. Whatever you do, choose an engine of proven merit and your troubles will be licked before you start.

## Construction

#### FUSELAGE:

The first step is to take your engine mounts and bolt your engine in place on them. Make sure that the engine is located so that it falls exactly as shown on the plans.

Next choose the bulkheads to fit your powerplant and cut them to shape. Now cement Bulkheads No. 1 and 2 as well as the firewall to the mounts and add the 1/4" reinforcements.

The two fuselage sides are now cut to size and cemented to the structure after which the remaining bulkheads can be installed.

The tail is now made as shown and the control system installed cementing the entire tail in place. Make sure you have 45 degrees of movement in both directions with your elevators.

The ignition, if used, may now be put in making sure that everything is fastened securely, after which the top sides and cowl block may be cemented on.

After installing the landing gear and tail skid as shown, the bottom piece may be put in to complete the structure.

After sanding to shape and cutting your battery box opening on the inside of the circle you are ready for the wings.

## WINGS:

The first step is to cut the ribs very accurately to shape, after which the leading and trailing edges may be notched as shown.

The wings are assembled on the drawings and when dry they should be removed and given a second coat of cement at all joints.

The center section sheet covering should now be added and when dry the wings should be carved to shape making sure that you maintain the proper airfoil sections.

When this has been completed they may be covered with a good grade of heavy tissue and given one coat of dope to protect them.

## ASSEMBLY:

The fine point in the building of the "Bipe" is the alignment of the flying surfaces. Herein lies the success or failure of your model as far as stuntability goes.

The first step is to cut the slot for the lower wing making sure it is at zero incidence. Next fit the top wing to the fuselage making sure that it is 2 degrees negative. In checking this you can use the bottom of the fuselage as a reference line and if the leading edge is about 3/16" lower than the trailing edge it should be right.

Now install the reinforcements that help hold the top wing in place after which the wings may be temporarily installed with pins to check the alignment.

When you are sure that it is right cement the wings in place using plenty of cement to obtain a good hold.

Now make the right hand strut as shown and while drying shape the left hand strut and install. Installation of the right hand strut will complete the structure except for one final sanding.

## FINISH:

The entire model should be doped well and a good filler used. You don't need a "super finish" but a good job does a lot to improve the looks and life span of the model. The engine and all the little items such as wheels should now be installed and caught up to ready the model for flight.

## FLYING:

If the "Bipe" is your first control line model it is hardly necessary to say that it would be wise to consult a more experienced flyer before making your first attempt.

In a good many cases a lot of grief can be saved in this manner. In any case it will be found to have ample stability and is very easy to handle with that ruggedness that brings it through many a bad accident.

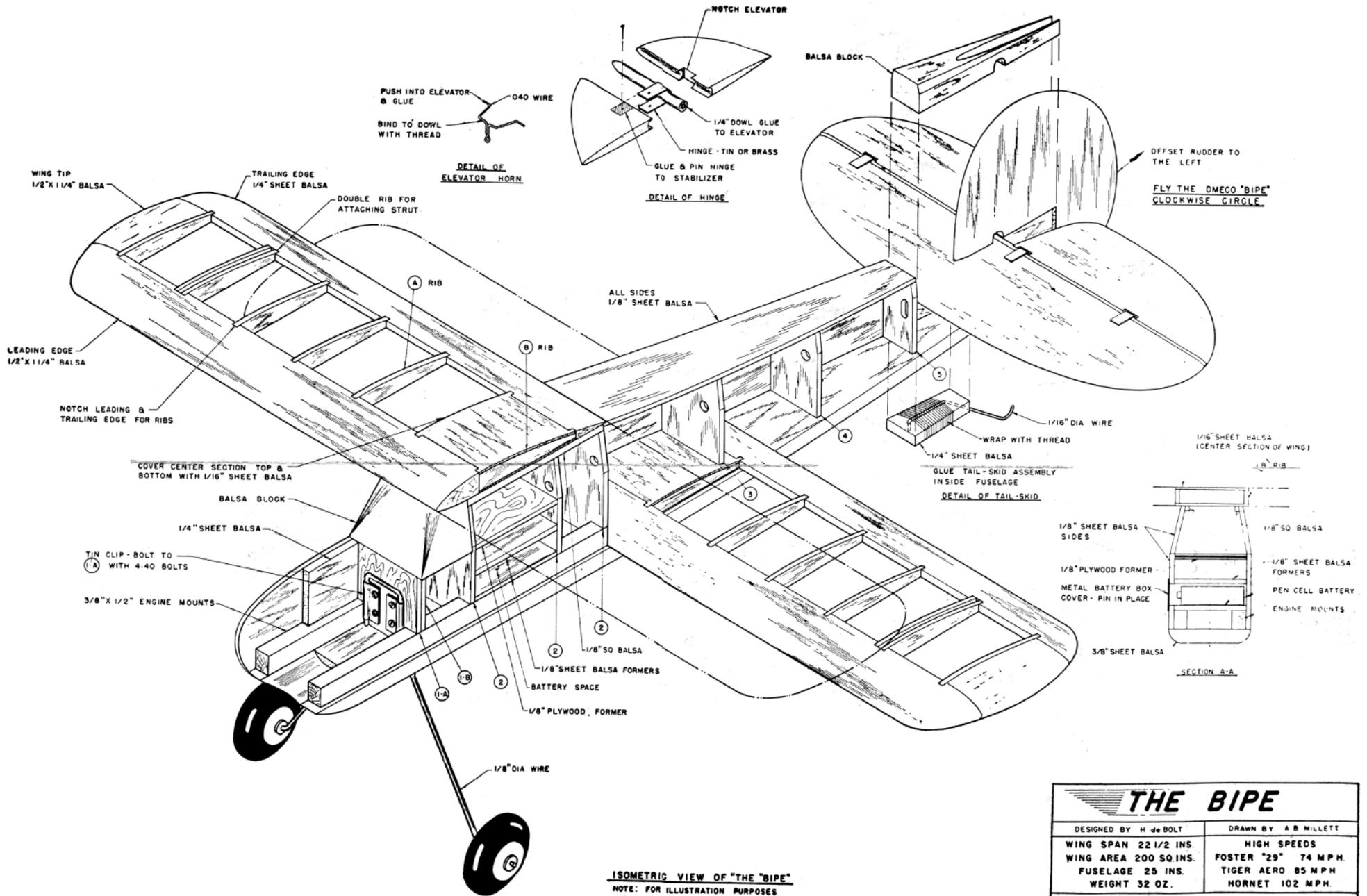
For the more experienced flyer he need not be afraid to do most anything in the book with it as it will respond with good snappy maneuvers and the zip that makes it a thrill to fly.

It will be found that it is equally responsive inverted or upright so that your flight pattern is only limited by your capabilities.

As a suggestion use 50 ft. lines with the smaller engines and go to 60 ft. for the larger ones. With glow plug and ignition engines it will be found that 8" pitch propellers work best, while diesels seem to need 10" pitch for best results.

Frankly we wish you the best of luck with the "Bipe" and hope that you will have many happy flights.





**ISOMETRIC VIEW OF "THE BIPE"**  
NOTE: FOR ILLUSTRATION PURPOSES  
THE LEFT SIDE IS NOT SHOWN

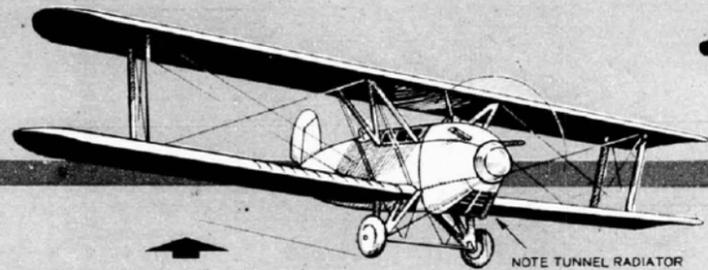
<b>THE BIPE</b>	
DESIGNED BY H de BOLT	DRAWN BY A B MILLETT
WING SPAN 22 1/2 INS.	HIGH SPEEDS
WING AREA 200 SQ.INS.	FOSTER "29" 74 M.P.H.
FUSELAGE 25 INS.	TIGER AERO 85 M.P.H.
WEIGHT 32 OZ.	HORNET 102 M.P.H.
A PRODUCT OF <b>THE de BOLT MODEL ENGINEERING CO.</b> WILLIAMSVILLE NEW YORK	



# Air Progress

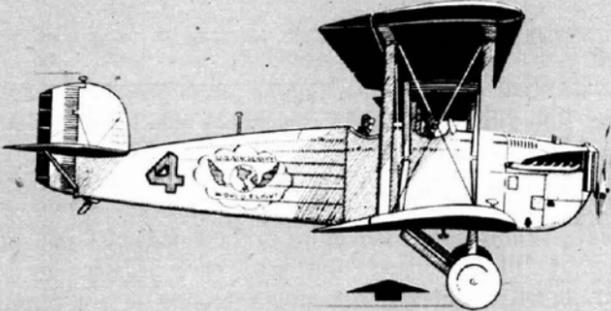
## THE DOUGLAS STORY

BY DOUGLAS ROLFE



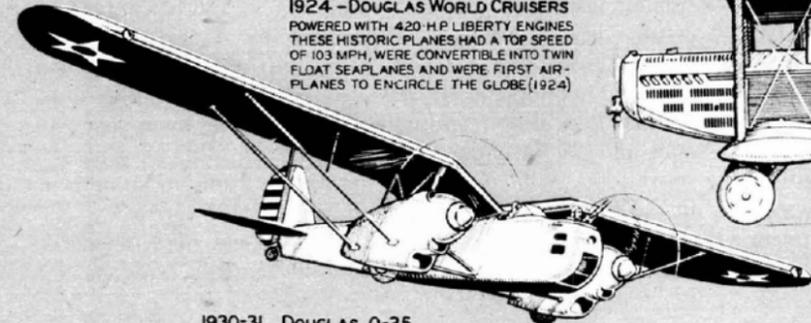
1920-DOUGLAS "CLOUDSTER"  
FIRST DOUGLAS DESIGN TO APPEAR.  
(400 H.P. LIBERTY, MAX. SPEED 120 MPH)

NOTE TUNNEL RADIATOR

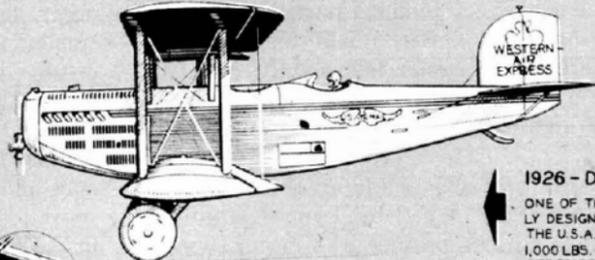


1921-DOUGLAS DT-1  
FIRST MILITARY DOUGLAS  
THIS TORPEDO-BOMBER  
HAD FOLDING WINGS, WAS  
ONE OF THE TOP DESIGNS  
PRODUCED DURING THIS ERA

RADIATOR EACH SIDE

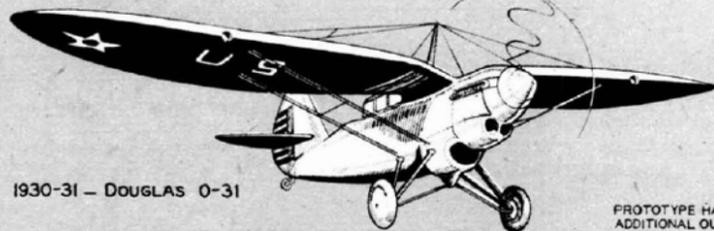


1924-DOUGLAS WORLD CRUISERS  
POWERED WITH 420 H.P. LIBERTY ENGINES  
THESE HISTORIC PLANES HAD A TOP SPEED  
OF 103 MPH, WERE CONVERTIBLE INTO TWIN  
FLOAT SEAPLANES AND WERE FIRST AIR-  
PLANES TO ENIRCLE THE GLOBE (1924)



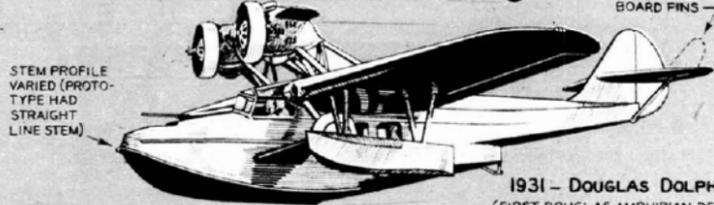
1926-DOUGLAS M-2  
ONE OF THE FIRST SPECIALLY  
DESIGNED MAIL PLANES IN  
THE U.S.A. THE M-2 CARRIED  
1,000 LBS. OF MAIL AT A TOP  
SPEED OF 145 MPH, OPERAT-  
ING FROM COAST TO COAST

1930-31-DOUGLAS O-35

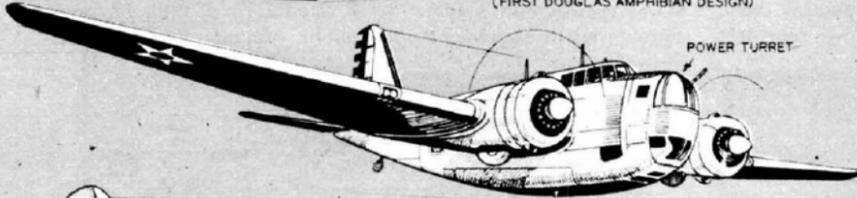


1930-31-DOUGLAS O-31

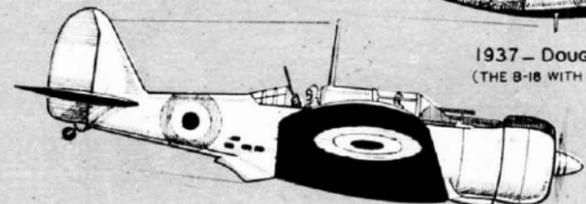
PROTOTYPE HAD  
ADDITIONAL OUT-  
BOARD FINNS



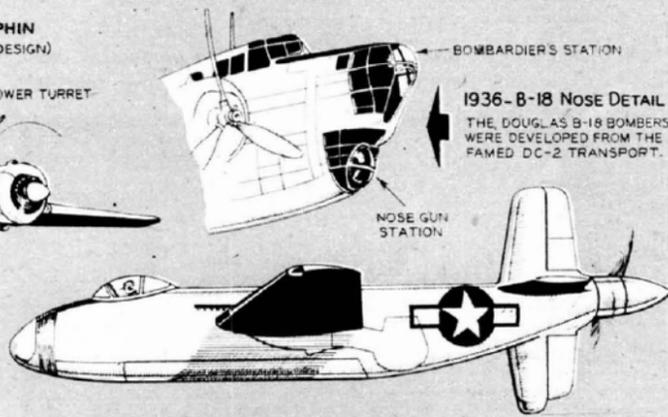
1931-DOUGLAS DOLPHIN  
(FIRST DOUGLAS AMPHIBIAN DESIGN)



1937-DOUGLAS B-18A  
(THE B-18 WITH MODIFIED NOSE)



1939-40-DOUGLAS B-8A  
(EXPORT MODEL ATTACK BOMBER)

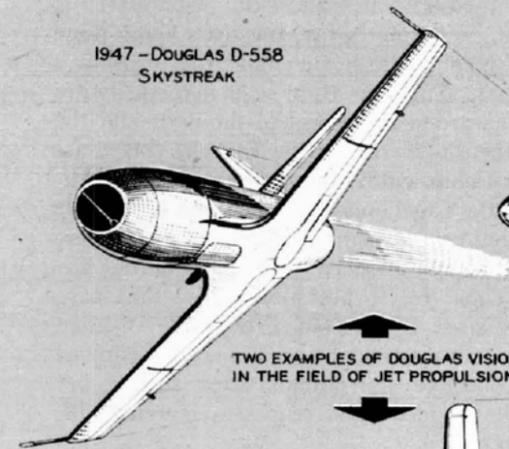


1936-B-18 NOSE DETAIL  
THE DOUGLAS B-18 BOMBERS  
WERE DEVELOPED FROM THE  
FAMED DC-2 TRANSPORT.

1945-DOUGLAS XB-42 "MIXMASTER"

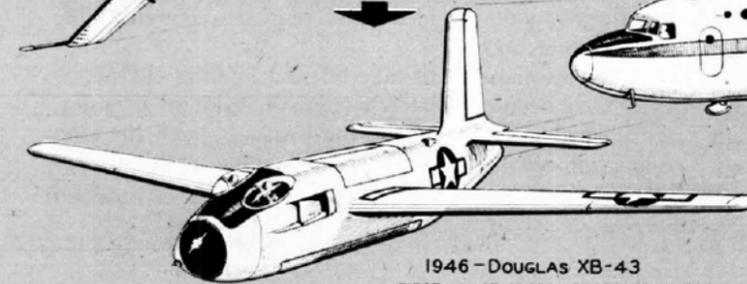
Founded in 1919 by Donald Douglas, still head of the company, the vast Douglas plants have produced more commercial transports than any company in the world.

In 1921 Douglas won a Navy torpedo-plane contract with their first military design, the Douglas DT shown here. Between 1937 and 1941 the company was engaged, in addition to other activities, in designing and building the B-19 bomber (not illustrated) whose 212-foot wing span and 18-ton bomb load capacity set the pattern for all big bombers produced since.

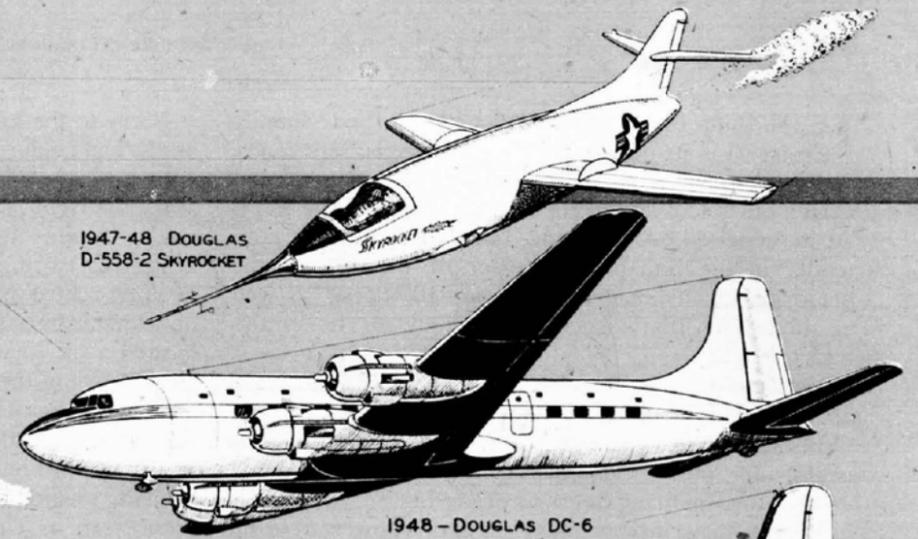


1947-DOUGLAS D-558  
SKYSTREAK

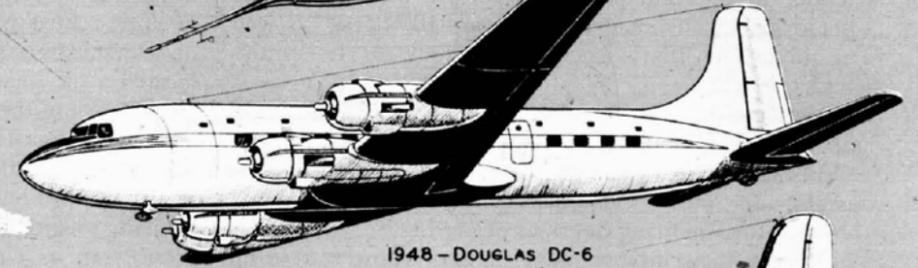
TWO EXAMPLES OF DOUGLAS VISION  
IN THE FIELD OF JET PROPULSION



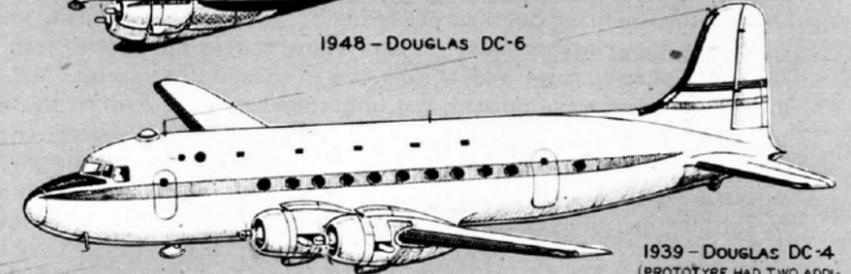
1946-DOUGLAS XB-43  
FIRST U.S. JET-PROPELLED BOMBER. AIR-  
FRAME WAS SIMILAR TO THAT OF THE XB-42



1947-48 DOUGLAS  
D-558-2 SKYROCKET

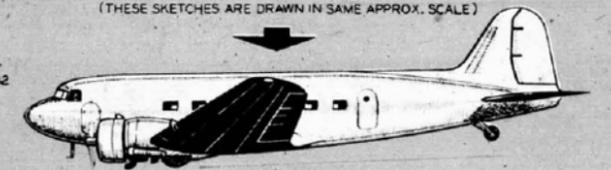


1948-DOUGLAS DC-6



1939-DOUGLAS DC-4  
(PROTOTYPE HAD TWO ADDI-  
TIONAL FINNS AND RUDDERS)

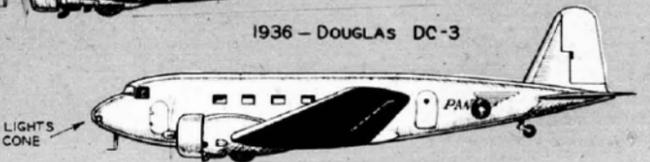
FOUR STAGES IN THE DEVELOPMENT OF  
THE WORLD-FAMOUS DOUGLAS TYPE DC.  
(THESE SKETCHES ARE DRAWN IN SAME APPROX. SCALE)



1936-DOUGLAS DC-3

LANDING LIGHTS  
IN NOSE CONE

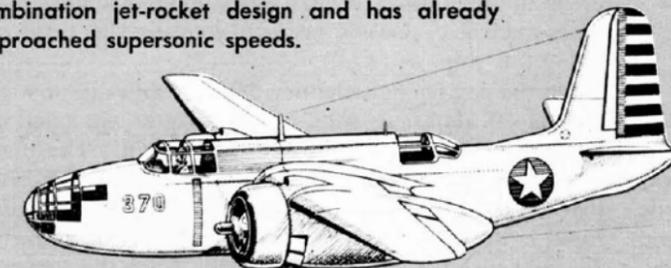
DOUGLAS  
ROLFE



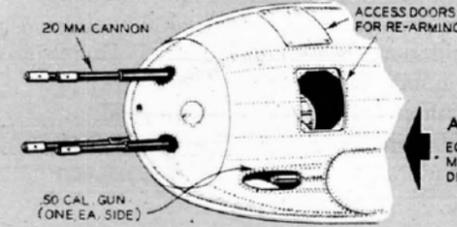
1934-DOUGLAS DC-2

During the last war Douglas fighters and bombers fought in every theater. More than 11,000 military versions of the DC-3 (C-47) were built for use as troop or cargo carriers. The latest Douglas military piston-engined design, the AD-1 Skyraider (not shown), a carrier-based attack plane, is one of the world's fastest planes.

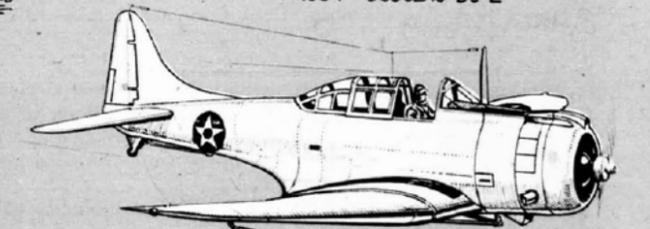
Douglas was one of the first U.S. firms to enter the jet field and set new speed records with their D-558 Skystreak. Their latest, the Skyrocket, is a combination jet-rocket design and has already approached supersonic speeds.



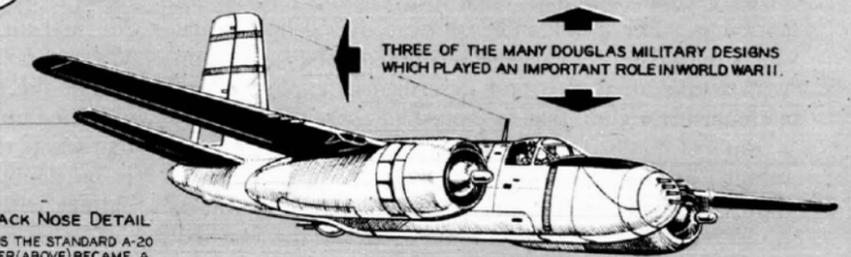
1939-DOUGLAS A-20 (DB-7)



A-20 ATTACK NOSE DETAIL  
EQUIPPED THUS THE STANDARD A-20  
MEDIUM BOMBER (ABOVE) BECAME A  
DEADLY HARD-HITTING ATTACK PLANE



1939-DOUGLAS SBD DAUNTLESS  
OBSCULENT AT THE TIME OF PEARL HARBOR THE DAUNT-  
LESS, A SHIPBOARD DIVE BOMBER, NEVERTHELESS ROLLED  
UP AN IMPRESSIVE WAR RECORD FROM 1941 UP TO V-J DAY.



1943-DOUGLAS A-26 INVADER  
THIS FORMIDABLE ATTACK PLANE MOUNTED 14 FIXED FORWARD-FIRING  
.50 CAL GUNS PLUS 4 REMOTELY CONTROLLED FLEXIBLE TURRET GUNS

THREE OF THE MANY DOUGLAS MILITARY DESIGNS  
WHICH PLAYED AN IMPORTANT ROLE IN WORLD WAR II.

# Peterson CRUISER

by Wayne Cartwright

## Notes on my Peterson Cruiser

My Cruiser was built from the plans originally available from John Pond. I scaled them 130%, giving 78 inches span and 640 sqin wing area. The scaling provided a better size for the Vintage E Texaco event that we have here in New Zealand.

E Texaco favours designs that can be built down to 8 oz/sqft and also have low drag and high lift at relatively low speeds. The Cruiser ticks these boxes due to its light structure, a high aspect ratio wing with good Eiffel 431 section, and a long tail moment.



The fuselage is a bit bulky but is well streamlined. Overall, it is a remarkably advanced design for 1939 – essentially a powered glider.

I retained balsa for the entire structure, except the usual ply motor and undercarriage mounts and dihedral braces. I moved the lower main spar forward to lie below the top spar and used the same wood size for both so that I could install 1/16" vertical webbing on the inner wing panels.

As well as a long tail moment, the Cruiser's nose moment is quite short. Hence, I considered it crucial to select very light wood for the aft structure. For this reason, the upper fin/rudder is a light built-up structure rather than the sheet shown on the plan.

I made two strictly cosmetic design changes: the cabin glazing is enlarged, and the zig-zag fuselage fairing pieces aft of the wing mount were changed to pieces that are perpendicular to the datum.

I built the fuselage in two stages. The top was built on the crutch that was pinned to the building board. This resulted in a structure that was sufficiently rigid to be turned over and held in a cradle to receive the bottom part.

I used central uprights at Stations 8, 11, and 14 (both above and below) and at Station 5 (below only) to keep the top and bottom longerons straight, and also to establish the correct curvature in the side view.



At the cost of a little more drag, I replaced the monowheel with a conventional two-wheel undercarriage because I wanted to ROG.

As you will see from the photos, the control surface areas are generous, because I think that a small movement of a large surface gives more positive control, and also less drag, than more movement of a small surface.

The model is covered with Sig Koverall, which is much lighter than many people seem to think. With five coats of thinned non-shrinking nitrate dope, Koverall is about the same weight as standard films.

On a model of this size, the doped Koverall adds about 8 oz. Polyspan would have been fine and about 2 oz lighter.

With the CG at about 40%, my Cruiser is very stable and also responsive in both pitch and turn at the low power settings and gliding that the typical E Texaco flight profile requires.



With the 2-cell 550 mah battery that I am allowed by our rules, driving a 3009 Hyperion with 9x6 APC E, the Cruiser flies for over 13 minutes in flat air.

At higher power settings, the model tends to Dutch roll - possibly due to the small vertical tail – so I doubt that this design would cope well with the higher power bursts required for Duration events.



The plan on the next page is the original full size. You can scale it up by 130% as Wayne did.

The downloadable book for this month is the 1939 Frank Zaic book containing his drawing of this model.  
Roland Friestad - Editor





**Download Frank Zaic's  
1939 Nats Photo Book  
Digitek Books Collection**

Digitek Books has an extensive collection of model aircraft and aviation books and will be making them available here for subscribers to download each month.

Frank Zaic was a well known modeler and the manufacturer of the JASCO line of kits, (Later known as JETCO). His line drawings and analysis of models appearing at contests world-wide appeared in many magazines and also in his own series of annuals.

Digitek has a complete collection of the Zaic books and digital versions will be periodically available at no charge for download by subscribers to RCMW.

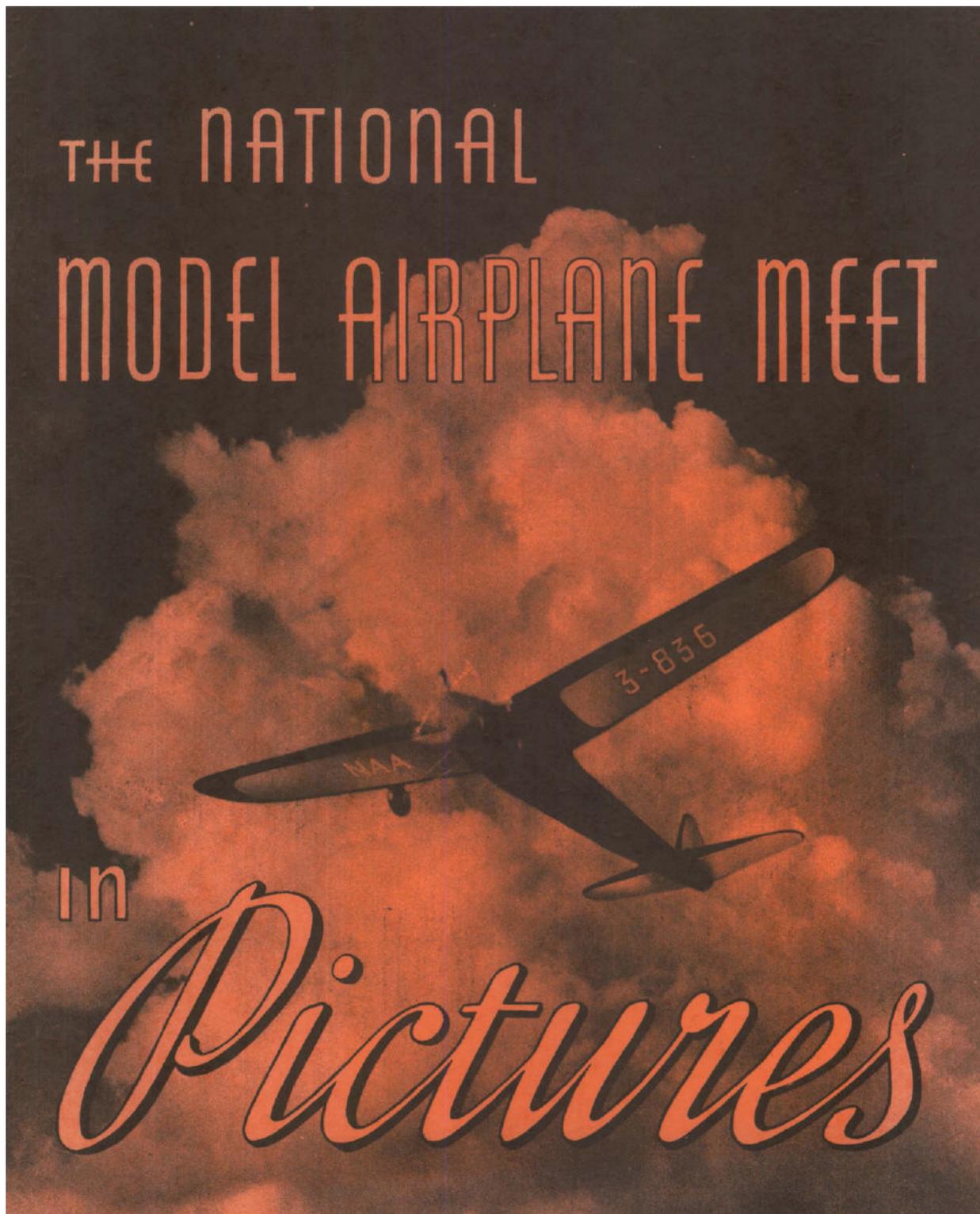
This issue has been processed using OCR (Optical Character Resolution) and is searchable.

To download this ZAIC book just click on the link below ---

**[-- CLICK ON THIS LINK --](#)**

This download link will expire on April 1, 2018, so if you'd like this book for your own collection, better do it now. There are more digital magazine collections and books for sale on our other website. Click on the link below to visit.

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**GOODYEAR TROPHY WINNER**

# MINNOW

**This attractive model of the Goodyear Race winner by Paul Plecan appeared in the January 1949 issue of Air Trails magazine. The cover of this issue of RCMW-FSP is from the cover of that same issue of Air Trails.**

AUTHENTIC PLANS BY EXPERT DESIGNER PAUL PLECAN GIVES YOU ONE OF THE MOST INTERESTING OF CONTROL-LINE FLYING SCALE MODELS. PLANE USES A VARIETY OF POWER PLANTS.

HERE'S a scale U-Control design that is a model builder's dream come true. Fast, good-looking, and relatively simple to build, Minnow is the job for those flying-scale beauty contests next season.

Scaled down from authentic factory drawings and Pete Bowers' on-the-spot data sheet, our model of the Minnow is 38" in span (2" = 1' scale) following the latest trend towards larger scale models.

All details are included for an exact replica of Herman "Fish" Salmon's Goodyear Trophy winner. Cream trim on bronze makes as flashy a job as we can think of-just wait till you see one of these in the air on a sunny day.

To duplicate the all-metal appearance of the original, the model was covered with sheet balsa. Due to the simple lines, planking is a cinch.

Engine mounting details show the new Atwood Triumph engine, but since the bearers are fairly close together, almost any engine down to a 29 will do the job. However, a larger engine, like the Triumph or a 60 will provide the power needed for extra good flights.

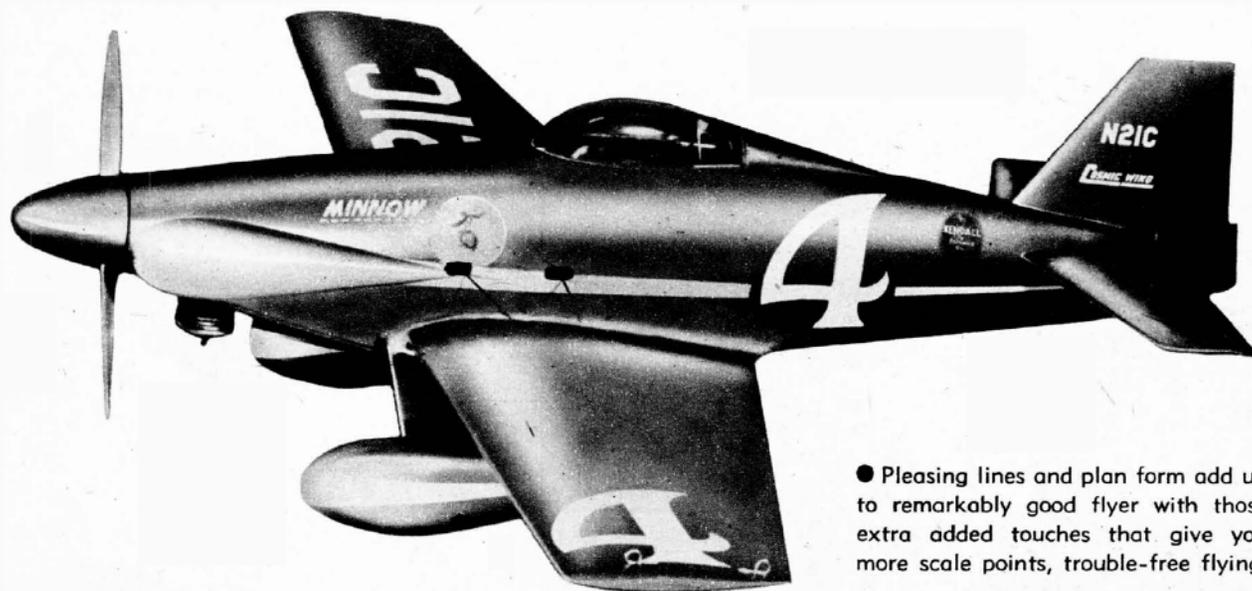
A modified form of crutch construction is used, simplifying fuselage alignment. The only hard items are the wing fillets and forming of the cockpit canopy. We know that won't scare you, so let's clear the bench. To eliminate the drudgery entailed in enlarging plans, you can obtain Air Trails' full size plans if you wish. *(RCMW Editor's Note - Our usual full size PDF file plans are at the end of this article).*

The first item on the- agenda is the fuselage. Four crutch or keel pieces are needed first. Obtain sheets of 1/8" balsa that are as similar as possible for these (preferably cut from the same plank.)

Formers are next, cut from firm 1/8" sheet stock. Since half-formers are shown on the plan, two of each will be required.

Start assembly by cementing and pinning two keel pieces together at the rear end (spread apart about 20 degrees). This angle will permit insertion of former 10 coated with cement along the side edges. After pinning it in place, work forward with formers 9, 8, 7 and 6--in that order.

Keep an eye on the line-up, as the fuselage may bend to one side if one keel is stiffer than the other.



● Pleasing lines and plan form add up to remarkably good flyer with those extra added touches that give you more scale points, trouble-free flying.

Due to the double taper of the engine bearers, they are added after formers #4 and #5 are in place. The remaining formers are slipped into place and the keel sides bent in and cemented to the formers.

Note from the fuselage top view that the taper is abrupt slightly aft of #5 and at #4. The keel pieces should be cracked slightly at these points by scoring the keels with a razor. Make the crack gently and cement to formers.

Take soft 1/8" x 3/8" balsa strips and start planking.

See supplementary sketch.

Apply strips in order shown, as the fuselage may warp if one side is done completely before starting the other.

The planking beneath the keel, aft of #7 is now added. Sheet balsa is cemented in place across the fuselage bottom, aft of the wing. The corners are now sanded (see sketch) and soft 3/16" x 1" strips cemented in place. Sand these round to conform with the fuselage curves.

Tail surfaces are next, but we won't go into detail-if you've built even 'a solid' model, you'll know the routine. Just a word of advice, though. Use a large flat sanding block to obtain a smooth job. Sandpaper held around your fingers will produce ridges and hollows that will spoil the job.

The elevator horn can be metal or plywood, as long as it is securely mounted and shaped as shown in the side view. Use silk hinges and plenty of 'em-we like to spread them out over the full span of the stabilizer for strength.

The bellcrank can be mounted now. Note that the push rod is 3/32" dia. Brass tubing with "L" ends bent from 1/16" dia. steel wire. The rear "L" joint is soldered and connected to the elevator first. Then, with the bellcrank and elevator at "neutral" the front "L" can be soldered to the push rod.

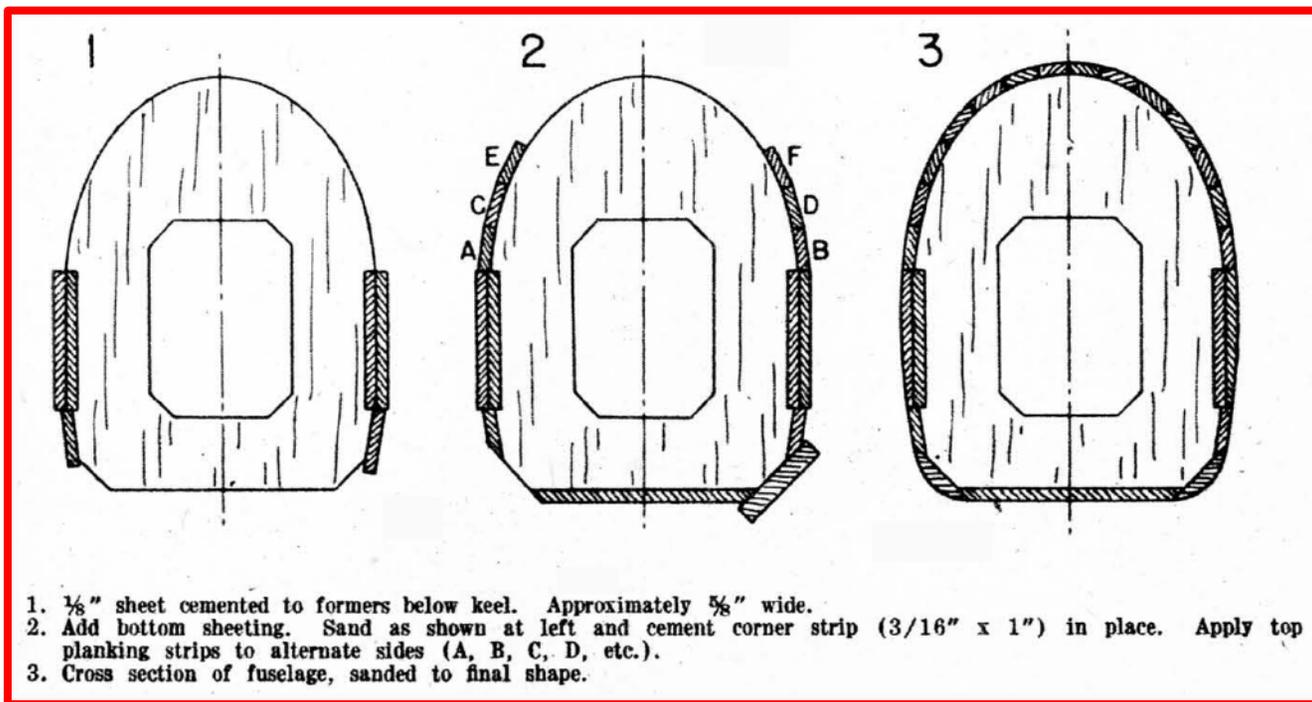
While we're on the subject, note that the lead-out wires from the bellcrank slant back along the wing panel to the loop guides at the tip. This helps keep the nose of the model pointed to the outside of the circle and makes allowance for the drag on the control lines.

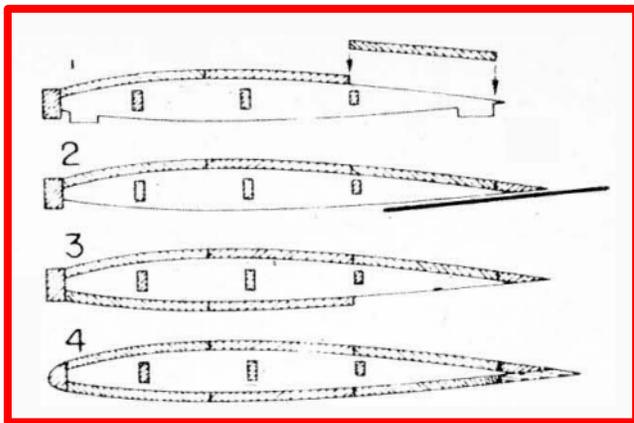
If you've done any control-line flying you've noticed that the lines arc out to the model, due to drag. So we took that into account in designing this job.

The wing is next, but even though it is fairly simple, don't relax to the point where a warped wing will result. Work on a flat board.

The ribs are slipped into place on the spars and the center section is pinned over the working drawings. Soft 1/8" sheet balsa is applied now and left until the cement is dry. Use 2" widths and cover small areas; it's much easier that way.

Remove all pins holding the center section to the plan and "bank" the wing so that one panel is flat on the plan (note how the stubs on the bottom of the ribs line up the ribs for correct incidence).





Cover the panel in small sections and allow the cement sufficient time to dry well. Then do the other panel. Once the top portion of the wing is covered and the cement dry, the wing can be removed from the work bench and the bottom covering applied after you sand the trailing edge to line up with the bottom of the ribs.

Apply the bottom covering on the center section first and work out toward the tips. Keep an eye out for warps and, if any seem to be developing, twist the wing in the opposite di'rection when applying the sheet covering.

For counterclockwise flying, it won't hurt if a slight negative warp sneaks into the right wing tip, as that will help keep the outside wing down and the lines taut.

Before cementing the soft tip blocks into place, note that several lengths of 1/8" dia. steel wire are cemented into the right wing tip. If you've ever seen a model bank and fly into its own circle, slackening its wires and crash, you'll know why this outboard weight is desired to keep the outer wing down.

Use 24" of 3/32" dia. steel wire (four 6" lengths, cemented to the spars or leading edge between ribs 5 and 7 will do) or an equivalent I-oz. weight near the .right wing tip.

The assembled' wing is now sanded, also the fuselage and tail assembly. Follow up with 2 or 3 coats of Duco white Primer Surfacer. Either brushing or spraying will do.

We sand the works smooth in 30 or 40 minutes, when the primer has dried well. Use a 240 or 280 wet or dry sandpaper to start and work down to a 300 or 320 grade. Again we say a flat sanding block is a must.

The wing is cemented to the fuselage, using liberal quantities of cement. To provide more than ample gripping surface for the cement, 1/4" square cross braces are cemented to the bottom of formers 5 and 6 (front and rear), as per the cross sections on the main plan.

Note that the wheel pants have a triple core, instead of the usual single one. This allows a slim well-rounded and streamlined cross section, as can be seen in the front view. Insert the wheel when assembling the core, as it cannot be slipped in place later.

The cheek cowl is simple--merely bandsaw them to shape as the side and top views show and carve to the cross-section indicated.

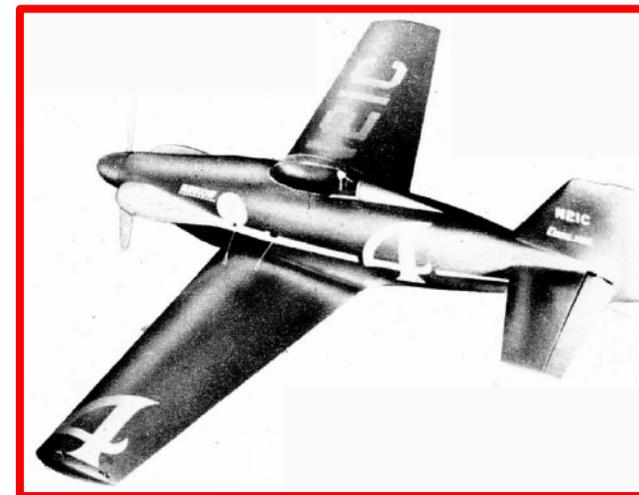
The holes at the front of the cowls should line up with corresponding holes in the side of the keel pieces to allow cooling air to enter the cowl and aid in cooling the engine. The air outlet is at the bottom of former 4.

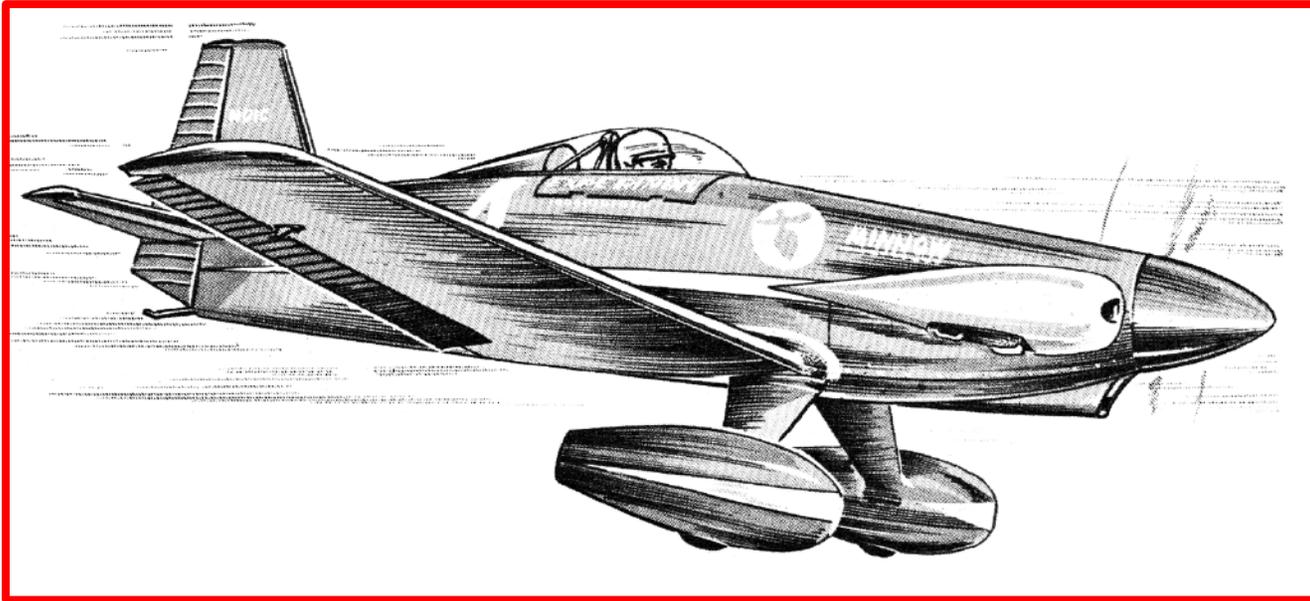
Form the celluloid canopy by soaking .010" or .020" sheet celluloid in "Tiger" Mold-ex and pulling down over a wooden form. The form should conform with the side and top view and be 1/8" longer and 1/16" deeper to make up for shrinkage once the celluloid has been removed from the form.

*RCMW Editor's Note - Not sure what "Tiger Mold-ex is, probably a solvent. Would guess that vacuum or even just heat forming would work well.*

Spinner is from hard balsa and held in place with dress snaps to disc of 1/16" plywood (2-1/2" dia.) cemented to the rear face of prop.

Bend all the landing gear struts from 3/32" spring steel wire. The helper strut is necessary if engines of .49 cu. in. displacement or larger are used as it keeps the landing gear from flexing too much on heavier ships.





The line-up strut helps align the assembly when cemented to the bottom of rib 1A. The upper arm joins to the bottom of rib 1A and the lower arm is cemented to the side of the wheel pants, helping line up the pants.

The engine bearers are notched to accommodate the cylinder-crankcase fastening bolts on the engine (see detail). The Triumph 49 used in the original model was glow plug equipped to save on weight, and was inverted to preserve the smooth cowl lines when viewed from the side or above.

A flexible needle valve extension was used, so that cowl protuberances would be kept to a minimum. If you want to use the engine upright, lower the engine bearers 1/2".

You may use the Atwood tank that comes with the engine or a larger tank (held on with clips) to the aft side of former 3.

With a full tank, ready to go, the original model balanced a little nose heavy. This was remedied with a little payload in the tail. We bored a large hole in the tail skid block, put in lead b-b ballast to bring the CG. to the proper point and sealed the hole with plastic wood.

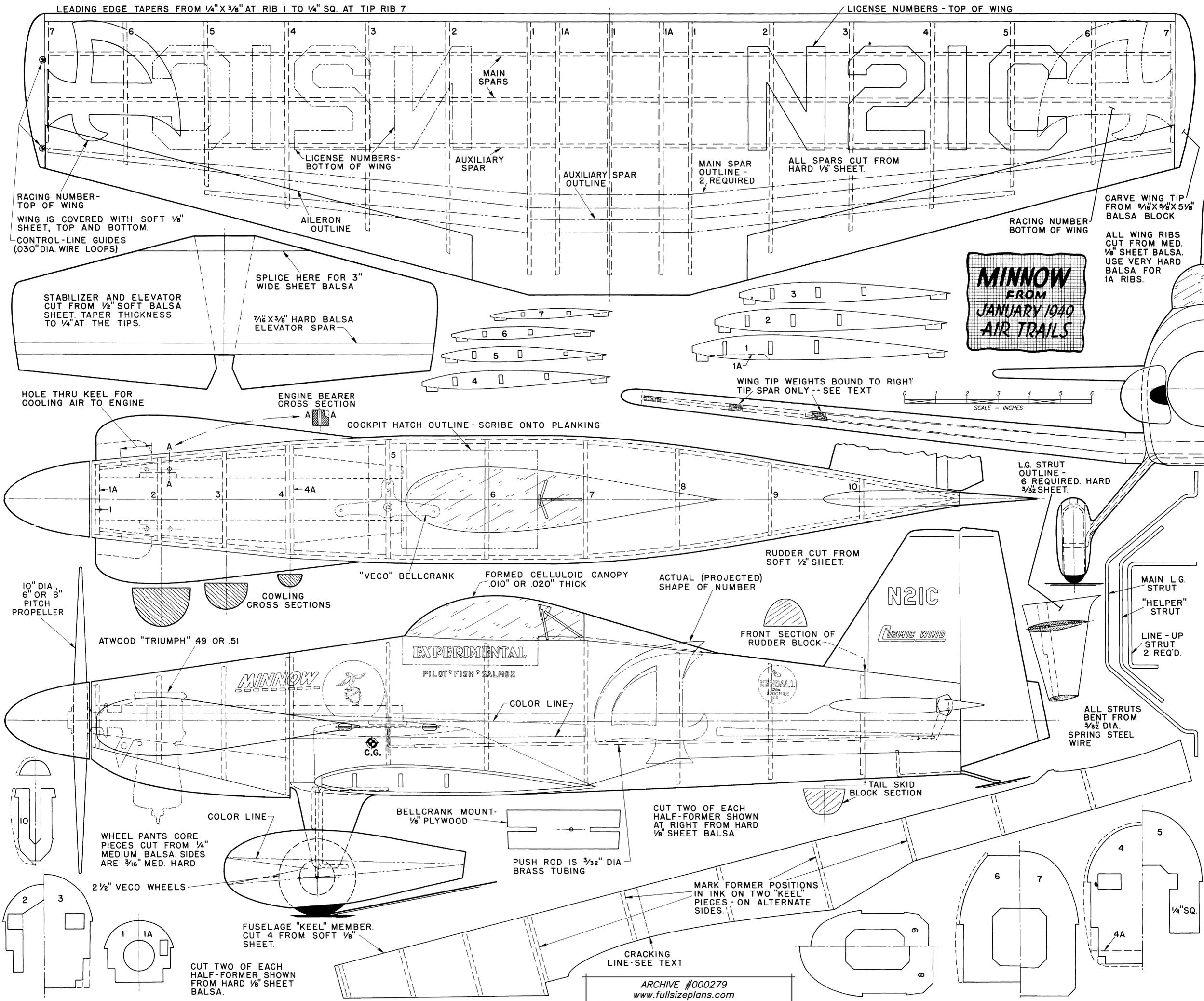
That reminds us of another subject - fillets. They can be carved from Plastic Wood, providing you have a few round "rat-tail" files. Plastic Wood is quite hard when dry and requires the proper files.

The assembled model should be sprayed, if possible, to obtain the smoothest finish. After 2 coats of Duco Cream lacquer, use 320 wet-or-dry sandpaper. Kept wet, the paper shouldn't clog up, and plenty of elbow grease will pave the way for a really smooth finishing coat.

Allow the final coat to dry overnight before masking off the lettering. About 3 or 4 coats of bronze will be necessary to hide the cream undercoat. If you can't get bronze lacquer, try some artist's bronze powder from the local art store.

Mixed with Duco clear lacquer (a teaspoonful of powder to a half-pint of lacquer) the result should be good. Agitate the mixture frequently as the powder settles quickly. Other finishes such as Berryloid and Testor's work equally well.

Flying is a routine that will be dictated by your own personal experience. The author prefers near-high or maximum rpm on all flights. Keep those lines tight, even with a slight breeze.



LEADING EDGE TAPERS FROM 1/4" X 3/8" AT RIB 1 TO 1/4" SQ. AT TIP RIB 7

LICENSE NUMBERS - TOP OF WING

RACING NUMBER - TOP OF WING  
WING IS COVERED WITH SOFT 1/8" SHEET, TOP AND BOTTOM.  
CONTROL-LINE GUIDES (030" DIA. WIRE LOOPS)

LICENSE NUMBERS - BOTTOM OF WING

MAIN SPARS

AUXILIARY SPAR

AUXILIARY SPAR OUTLINE

MAIN SPAR OUTLINE - 2 REQUIRED

ALL SPARS CUT FROM HARD 1/8" SHEET.

CARVE WING TIP FROM 3/16" X 5/8" X 5/8" BALSA BLOCK

RACING NUMBER BOTTOM OF WING

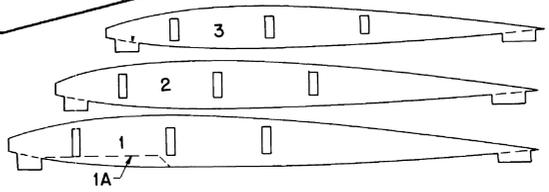
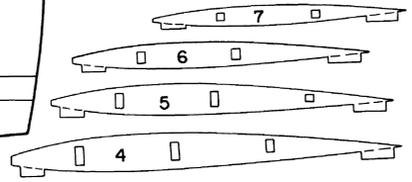
ALL WING RIBS CUT FROM MED. 1/8" SHEET BALSA. USE VERY HARD BALSA FOR 1A RIBS.

**MINNOW**  
FROM  
JANUARY 1949  
AIR TRAILS

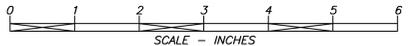
STABILIZER AND ELEVATOR CUT FROM 1/2" SOFT BALSA SHEET. TAPER THICKNESS TO 1/4" AT THE TIPS.

SPLICE HERE FOR 3" WIDE SHEET BALSA

7/16" X 3/8" HARD BALSA ELEVATOR SPAR



WING TIP WEIGHTS BOUND TO RIGHT TIP SPAR ONLY - SEE TEXT



HOLE THRU KEEL FOR COOLING AIR TO ENGINE

ENGINE BEARER CROSS SECTION

COCKPIT HATCH OUTLINE - SCRIBE ONTO PLANKING

L.G. STRUT OUTLINE - 6 REQUIRED. HARD 3/32" SHEET.

RUDDER CUT FROM SOFT 1/2" SHEET.

10" DIA. 6" OR 8" PITCH PROPELLER

ATWOOD "TRIUMPH" 49 OR .51

COWLING CROSS SECTIONS

"VECO" BELLCRANK

FORMED CELLULOID CANOPY .010" OR .020" THICK

ACTUAL (PROJECTED) SHAPE OF NUMBER

FRONT SECTION OF RUDDER BLOCK

N21C  
COSMIC WIND

MAIN L.G. STRUT  
"HELPER" STRUT  
LINE-UP STRUT 2 REQ'D.

ALL STRUTS BENT FROM 3/32" DIA. SPRING STEEL WIRE

EXPERIMENTAL  
PILOT FISH SALMON

COLOR LINE

BELLCRANK MOUNT - 1/8" PLYWOOD

CUT TWO OF EACH HALF-FORMER SHOWN AT RIGHT FROM HARD 1/8" SHEET BALSA.

PUSH ROD IS 3/32" DIA BRASS TUBING

MARK FORMER POSITIONS IN INK ON TWO "KEEL" PIECES - ON ALTERNATE SIDES.

TAIL SKID BLOCK SECTION

WHEEL PANTS CORE PIECES CUT FROM 1/4" MEDIUM BALSA. SIDES ARE 3/16" MED. HARD

2 1/2" VECO WHEELS

FUSELAGE "KEEL" MEMBER. CUT 4 FROM SOFT 1/8" SHEET.

CUT TWO OF EACH HALF-FORMER SHOWN FROM HARD 1/8" SHEET BALSA.

CRACKING LINE - SEE TEXT

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**Back Issue**  
**MAGAZINE ARCHIVES**  
from the Digitek Books Collection

Here's the next in our series of monthly back issues of model airplane magazines available for download to subscribers.

This month's choice is the August 1941 issue of MODEL AIRPLANE NEWS. It has four construction articles and several three views along with all the pages containing ads with prices we all wish were still the same as back then.

This issue has been processed using OCR (Optical Character Resolution) and is searchable.

To download the August 1941 issue of MODEL AIRPLANE NEWS click on the link below ---

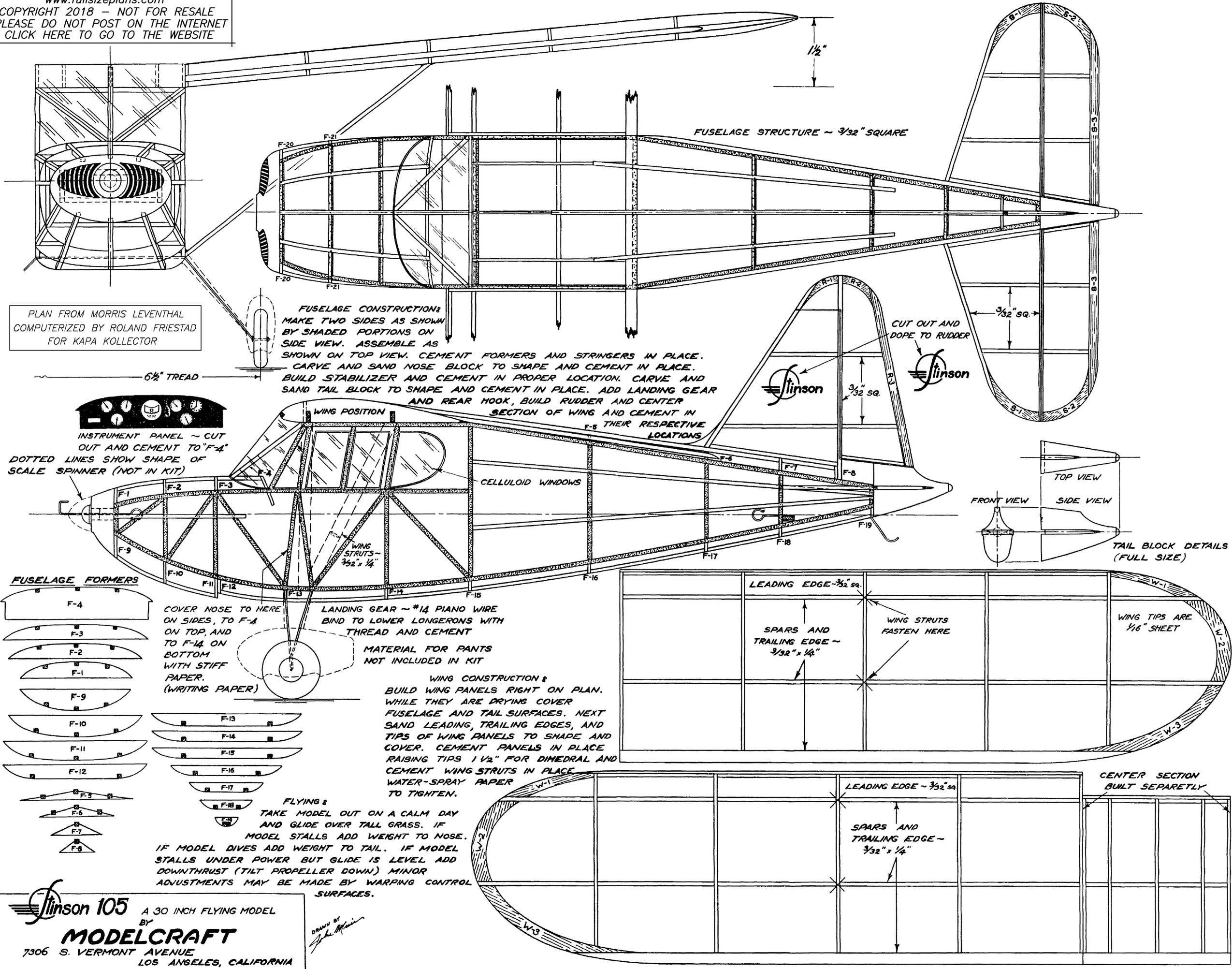
**[-- CLICK ON THIS LINK PLEASE --](#)**

This download link will expire on March 1, 2018, so if you'd like this issue for your own collection, better do it now. As a note of interest, these issues are stored in the "cloud" that you see mentioned as one of the latest of the buzzwords used by the computer folks. We use a service called Mediafire which can easily handle very large files that would otherwise cause problems with downloading. There are more digital magazine collections and books available on our other website. Click on the link below to visit.

**[www.digitekbooks.com](http://www.digitekbooks.com)**



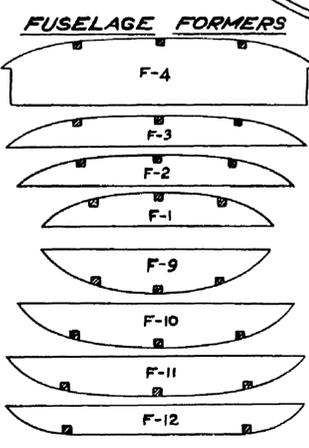
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PLAN FROM MORRIS LEVENTHAL  
COMPUTERIZED BY ROLAND FRIESTAD  
FOR KAPA KOLLECTOR

**FUSELAGE CONSTRUCTION:**  
MAKE TWO SIDES AS SHOWN BY SHADED PORTIONS ON SIDE VIEW. ASSEMBLE AS SHOWN ON TOP VIEW. CEMENT FORMERS AND STRINGERS IN PLACE. CARVE AND SAND NOSE BLOCK TO SHAPE AND CEMENT IN PLACE. BUILD STABILIZER AND CEMENT IN PROPER LOCATION. CARVE AND SAND TAIL BLOCK TO SHAPE AND CEMENT IN PLACE. ADD LANDING GEAR AND REAR HOOK, BUILD RUDDER AND CENTER SECTION OF WING AND CEMENT IN THEIR RESPECTIVE LOCATIONS

6 1/2" TREAD  
INSTRUMENT PANEL ~ CUT OUT AND CEMENT TO "F-4"  
DOTTED LINES SHOW SHAPE OF SCALE SPINNER (NOT IN KIT)



COVER NOSE TO HERE ON SIDES, TO F-1 ON TOP, AND TO F-14 ON BOTTOM WITH STIFF PAPER. (WRITING PAPER)

LANDING GEAR ~ \*14 PIANO WIRE BIND TO LOWER LONGERONS WITH THREAD AND CEMENT  
MATERIAL FOR PANTS NOT INCLUDED IN KIT

**WING CONSTRUCTION:**  
BUILD WING PANELS RIGHT ON PLAN. WHILE THEY ARE DRYING COVER FUSELAGE AND TAIL SURFACES. NEXT SAND LEADING, TRAILING EDGES, AND TIPS OF WING PANELS TO SHAPE AND COVER. CEMENT PANELS IN PLACE RAISING TIPS 1 1/2" FOR DIHEDRAL AND CEMENT WING STRUTS IN PLACE WATER-SPRAY PAPER TO TIGHTEN.

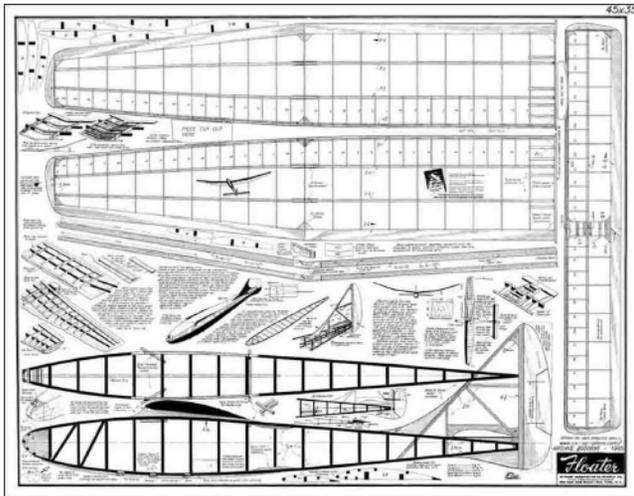
**FLYING:**  
TAKE MODEL OUT ON A CALM DAY AND GLIDE OVER TALL GRASS. IF MODEL STALLS ADD WEIGHT TO NOSE. IF MODEL DIVES ADD WEIGHT TO TAIL. IF MODEL STALLS UNDER POWER BUT GLIDE IS LEVEL ADD DOWNTHRUST (TILT PROPELLER DOWN) MINOR ADJUSTMENTS MAY BE MADE BY WARPING CONTROL SURFACES.

**Stinson 105** A 30 INCH FLYING MODEL  
By **MODEL CRAFT**  
7306 S. VERMONT AVENUE  
LOS ANGELES, CALIFORNIA

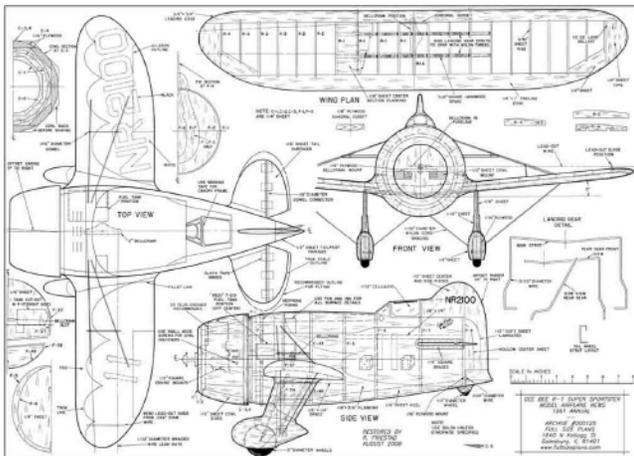
DRAWN BY  
*John H. Hain*

# Coming Attractions

Be sure to watch for the March issue of RCMW for these features.



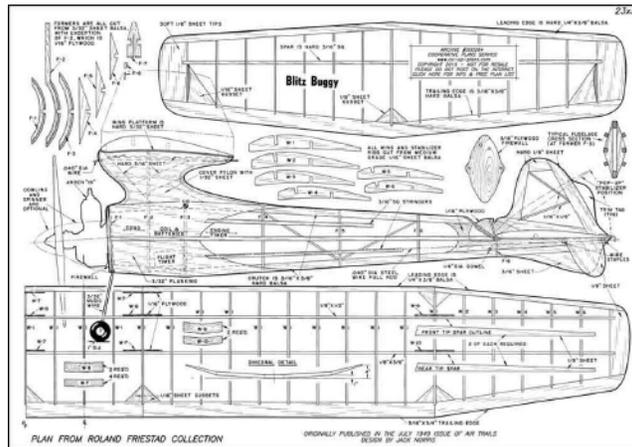
Jasco FLOATER Tow Line Glider



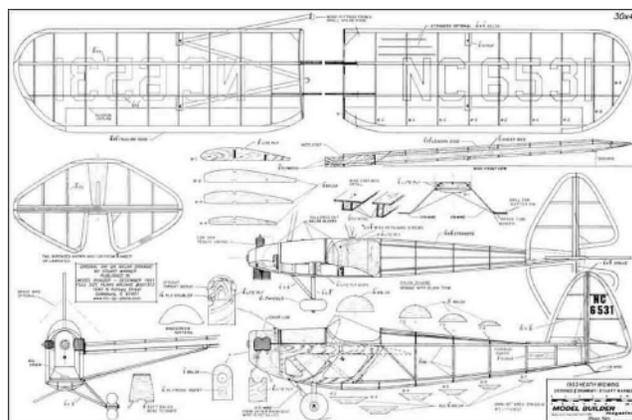
GEE BEE UC Scale



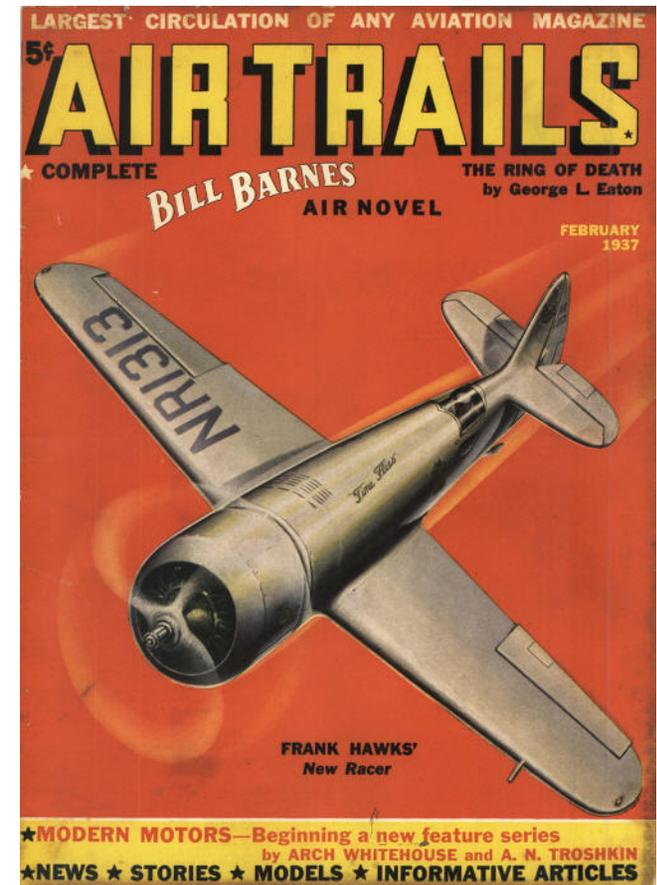
ARES UC Stunt Plans



BLITZ BUGGY FF Old Timer



HEATH MIDWING RC Scale



Shown above is the cover from the very first issue of AIR TRAILS magazine from February 1937. You will be able to download this complete rare issue in the March issue of RCMW.

The magazine went by several names and so this one, while the first issue known as AIR TRAILS, is listed as Volume VII, No 5. Previously it was known as BILL BARNES AIR TRAILS and even earlier as BILL BARNES, AIR ADVENTURER. Each issue had at least one complete adventure story as well as model and full size aviation articles. It wasn't until about 2 years later that the Adventure novels were dropped in favor of more model airplane content.

Note - We have all the earlier issues too.

# SHOO-FLY

**Be prepared with this high-flying towline glider when Spring's first balmy thermal comes swirling along!**

**by Chuck Giessen**

**This nice looking and easy to build Towline Glider comes from the April 1950 issue of Flying Models.**

Shoo-Fly is a sharp little Class D towline glider of just a shade over 200 square inches. Cross section and weight is up to par-it can be flown in contests as well as for sport. In either case you are 'assured' of many fine flights if instructions are followed closely.

The original model has several O.O.S. flights to its credit, plus a very good flight average on the normal 100' of towline. If you happen to be a bit lazy, you'll be glad to know that the ship also works well with the Hi-Start launching method.

Construction is very simple, yet rugged. The plans are full size, ready for use. However, space permitted us to show only the left half of the wing so it will be necessary to make right hand tracings of these parts.

*Editor's Note - The large format printer/plotters available at copy shops and office supply stores can make mirror image copies for you.*

The fuselage can best be described as a balsa sandwich. It has a core of 3/16" sheet and 3/16" squares, covered on both sides with 1/16" sheet. To make a real "Dagwood" of it, blocks are cemented on each side of the nose to bring the fuselage to the required cross section (see drawings of Section A, B and C).

Start construction by shaping the 3/16" sheet core to outline and pinning it in place on the plans. Now add the longerons and cross pieces which are shown as dotted lines in the plans.

While this is drying, go to work on the rudder, which is very simple. Simply cut the outline from 1/8" medium hard sheet, lay it in place on the plans, add crosspieces, and allow to dry.

Let's hop back to the fuselage. Remove it from the plans and cement the 1/16" sheet outer-layer to each side. Use plenty of pins to hold the sheet in place until it is dry. Now add the 3/8" x 3" x 11" soft balsa blocks to each side of the nose.

When dry, shape the fuselage to the cross section, using the three typical cross section views shown.

The rudder should be dry by now so remove it from the plans, shape its leading and trailing edges and cement it in place.

Next the 1/16" plywood stabilizer platform should be cut out and cemented in place. Use several coats of cement around the rudder and stabilizer platform to assure a strong joint.

Now drill holes in the fuselage for the three rubber pegs, which are cut from 3/32" birch dowel. Cement these in place securely.

Cut a slot in the top of the fuselage and cement in place the front wing hook, made of 1/16" piano wire. Coat this several times to assure a good joint.

The last job to ready the fuselage for covering is to dig a well in the nose to use as a ballast box for balancing the model.

Start the wing by cutting the wing ribs from quarter-grained 1/16" sheet balsa. Pin the 3/16" square leading edge in place on the plans. This should be of fairly hard stock to withstand collisions with trees, telephone wires, etc.

The trailing edge should be tapered and also pinned in place, followed by the two spars of 1/8" x 1/4" hard, straight-grained balsa. (Don't put the structure of the flat center section in place at this time-it can be added to the wing later on).



Carefully cement the wing ribs in place, omitting the ribs at the dihedral breaks. (These too will be added later.)

While this is drying, cut the spar joiners from 1/16" plywood. Now, remove the four sections of framework from the plans. To the inner ends of the spars on each outer panel, cement the plywood joiners. Do this also to the inner ends of the right inner panel.

While the joiners are drying thoroughly, we can start on the stabilizer. As with the wing, the first thing to do is to cut out the ribs.

The stabilizer is straight, so they are all the same size. Pin in place the leading edge, trailing edge and spar and then add the ribs.

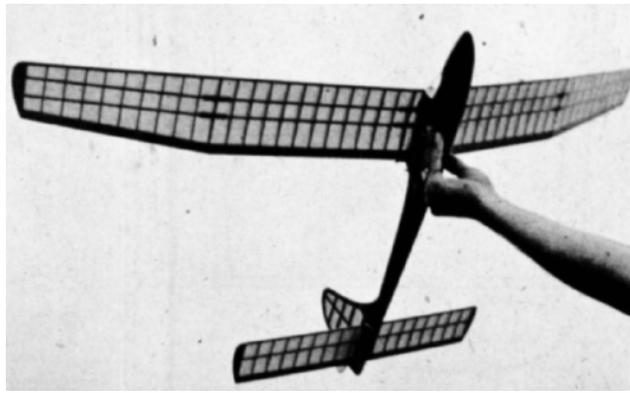
By now the wing sections should be ready to assemble. Join the two center panels together first. When they have dried, add the outer panels.

Be sure to cement all the leading and trailing edge ends well. Then, add the center section leading edge, trailing edge, spars and ribs. Also add the ribs at the dihedral breaks. Cement the blocks that form the wing tips in place.

A little old-fashioned elbow grease is necessary to finish the wing. The tips and leading edge should be cut to airfoil shape and the entire structure well sanded.

The stabilizer should now be finished off exactly as the wing was.

The original model was covered with blue silk on the fuselage and rudder, with yellow silkspan on the wing and stabilizer. If silk is too expensive for your pocket, stick to silkspan exclusively.



Use the light grade, applying it either wet or dry. If you apply it dry, the covering will have to be sprayed with water to shrink it. Then use about two or three coats of a good grade of clear dope, to which a small amount of castor oil has been added. This will help to prevent warping in the surfaces.

With the addition of a windshield cut from light celluloid, the model is now ready for flying.

Add enough ballast to the nose so that the model balances on the rear spar. The model should fly right off the workbench, with possibly a slight change in incidence. The towhook was not shown in the plans as its position varies greatly with the model and wind conditions.

If your model turns to the right. As the original does, the hook should be on the right side. This helps to overcome the circling tendency, so the ship may be towed more easily.

A suggested position for the hook would be a spot on the right side of the body, about 2-1/2" directly under the wing leading edge. If the model tends to climb too fast, move the hook forward, if too slow, move it backward.

It is a good idea to tie a small piece of cloth or paper to your towline, about a foot from the hook. This helps to pull the line' off the model when you wish to release.

#### BILL OF MATERIALS

(Balsa unless otherwise specified)

4- 3/16" x 3/16 x 36" (medium) ..... Wing leading edge longeron and cross pieces

4- 1/8" x 1/4" x 36" (hard) .... Wing and stabilizer spars

2- 3/16" x 5/8 x 36" (medium) .... Wing trailing edge

1- 1/2" x 3/16" x 36" (medium) . . . . . Stabilizer trailing edge

1- 1/8" x 1/8 x 36" (medium) .. .... Rudder cross pieces

1- 1/8" x 2" x 12" (medium) ..... : . . Rudder outline

5- 1/16" x 2" x 36" (medium) .. . . . Fuselage covering and ribs

2- 3/8" x 3" x 11" (soft) ..... .. Fuselage blocks

1- 3/16" x 3" x 13" (soft) ..... .. Fuselage core

1/16" wire for wing hooks

1/16" x 3" x 6" plywood for spar joiners

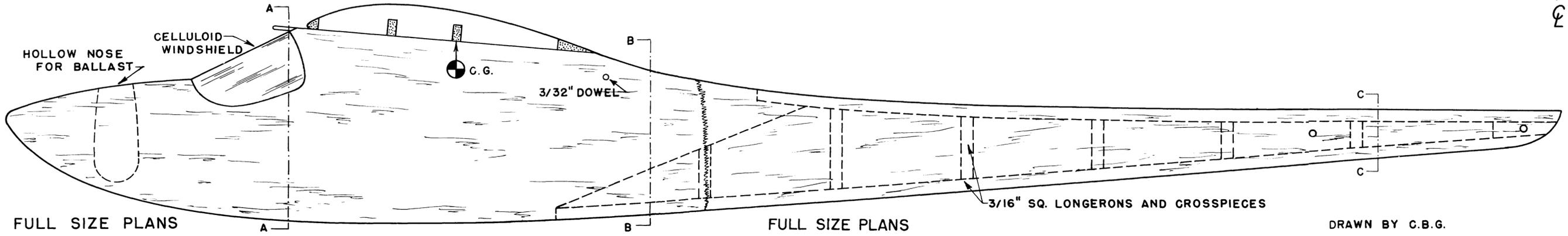
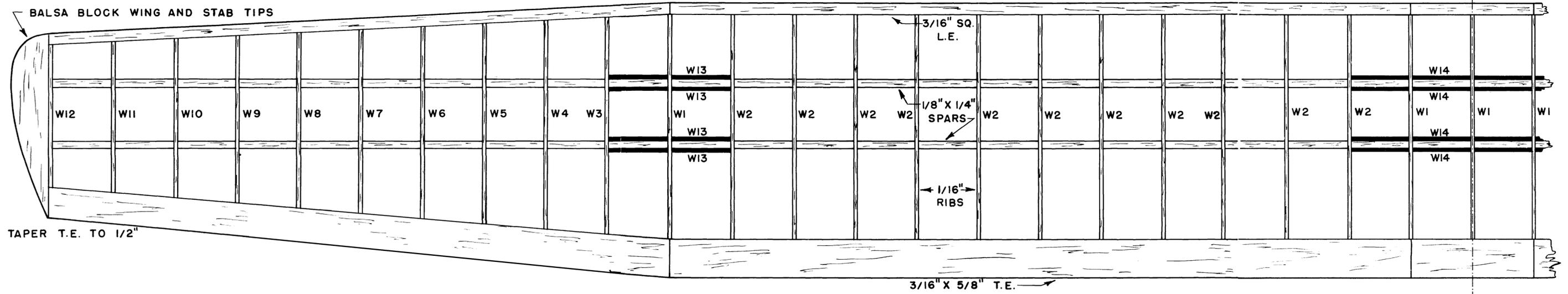
3" x 3" celluloid

3/32" dowel for rubber pegs

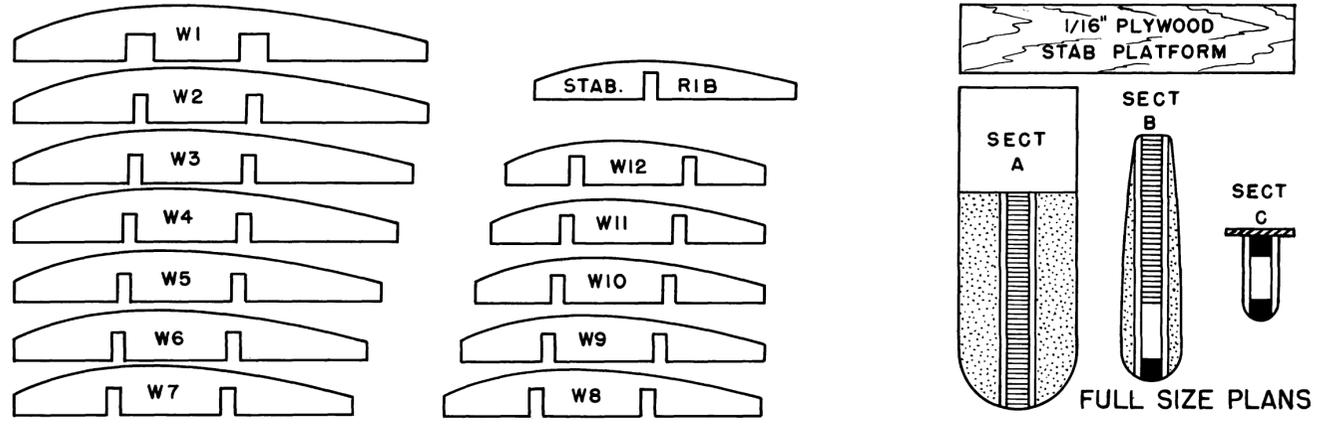
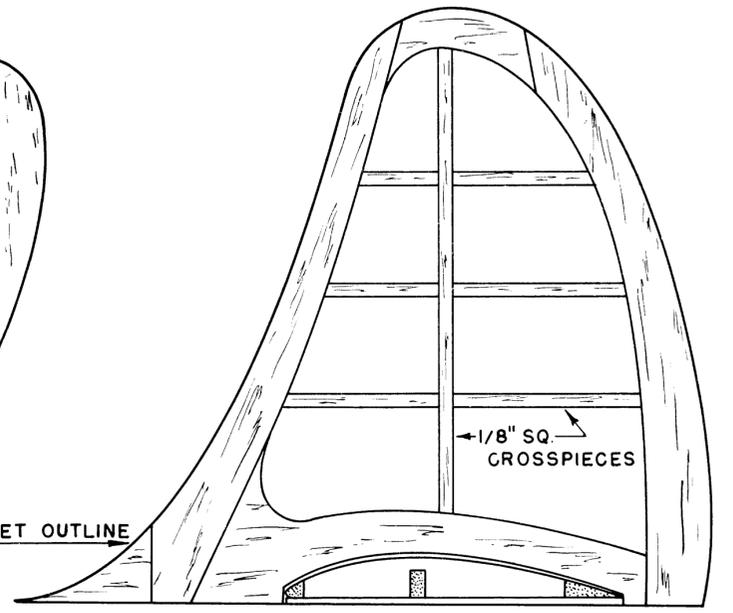
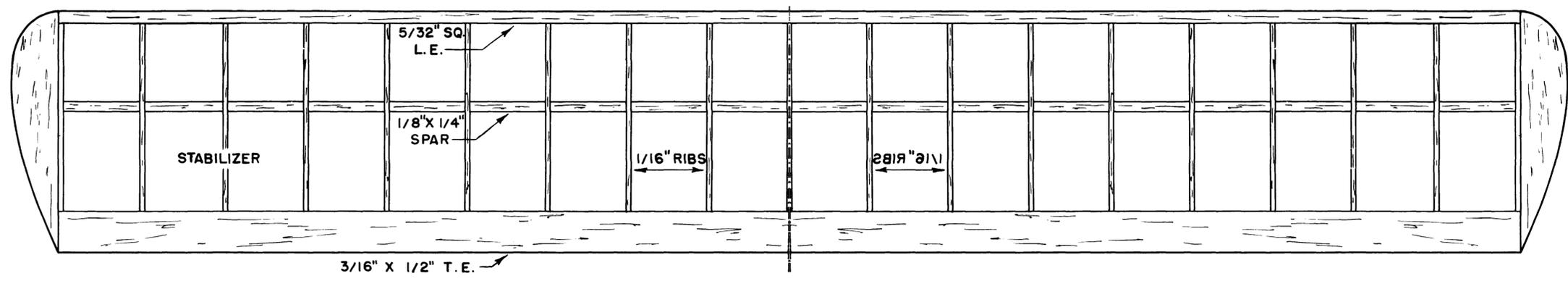
Cement

Dope

Silkspan.



DRAWN BY C.B.G.



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# Back Issues of Model Airplane Magazines

If you're like me, you enjoy paging through model airplane magazines and plans, sometimes to find a project to build, to research a particular aircraft, or to just spend some pleasant time away from the daily grind.

If you like to build models, the magazines of today don't offer much since they are primarily expensive catalogs of ready-to-fly models. There's nothing wrong with RTF or ARF models but they don't offer much to interest model BUILDERS.

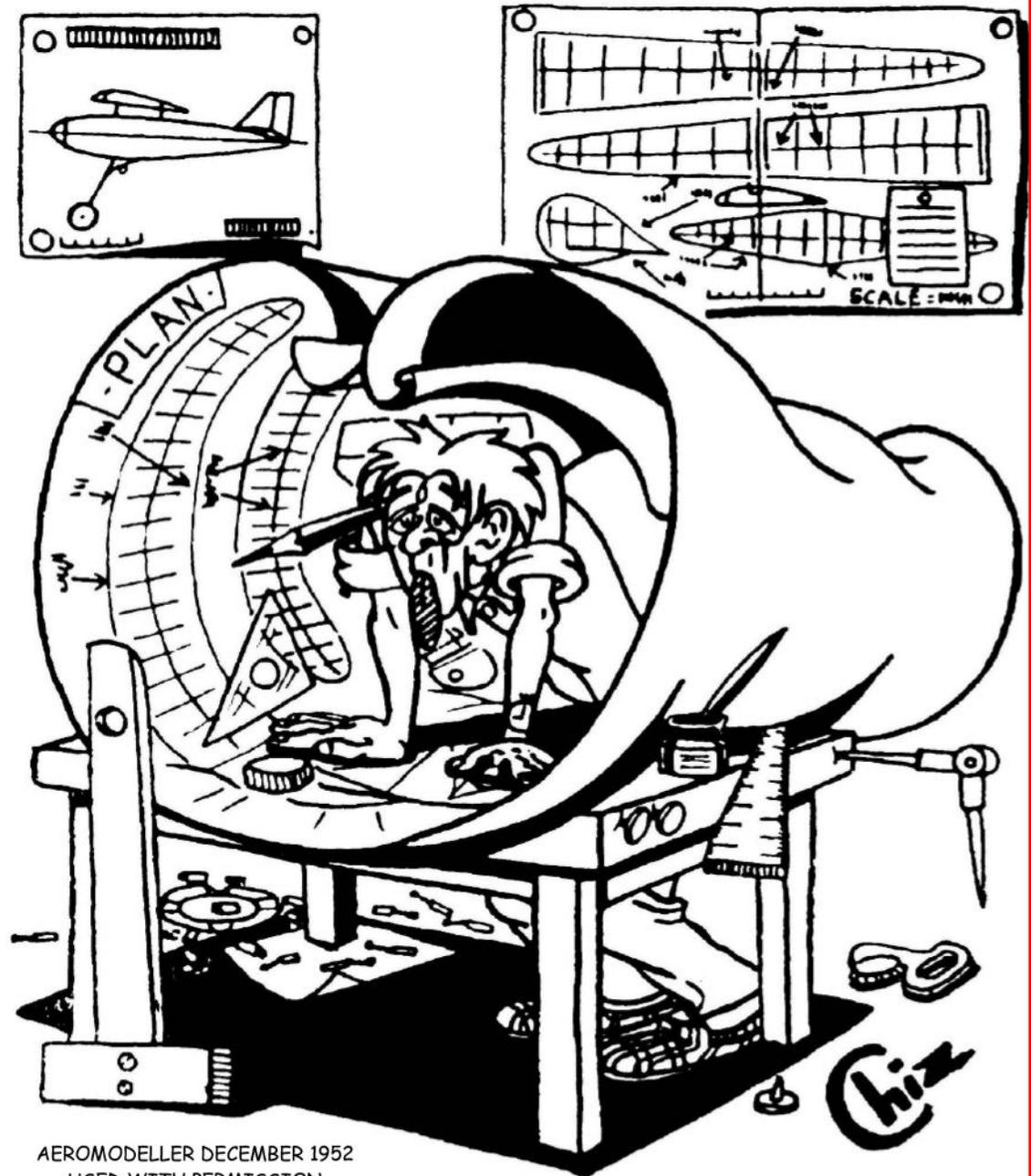
That's NOT the way it was in the past, when you had to build a model before you could fly it. If you're an old-timer, as I am, you have fond memories of Air Trails, Flying Models, Model Airplane News, Aeromodeller and many of the several other magazines available "way back when".

If you're a relative newcomer to modeling and want to learn how to build them, those old magazines can provide a wealth of useful information, plans and how-to-do-it articles.

There are several problems with those old magazines. They are sometimes hard to find, often in bad condition, and in many cases they are so fragile that they can fall apart just by turning the pages. This is because they were often printed on pulp paper, also known as newsprint. Newsprint is inexpensive, but has residual chemicals that cause it to deteriorate when exposed to the air and particularly to sunlight. Your wife or "significant other" might also ask "When are you going to get rid of all those smelly old magazines?"

I admit to being a bit of a "nut case" but have been collecting these magazine for over 50 years and now I am trying to digitize them to preserve them for other modelers. They are now available as digital PDF files. See the details on the next page.

Keep 'em Flying - Roland Friestad



AEROMODELLER DECEMBER 1952  
USED WITH PERMISSION

# Great Gifts for Modelers

## Digital Magazines on USB Flash Drive Cards



**AEROMODELLER**, the premier British model airplane magazine is being digitized. **Ready now are all 240 issues from 1950 and 1960** including the full size plans that were sometimes included in each issue. On the left is a reproduction of the November 1935 cover of Vol 1, No 1. All of the earlier issues will also be available later in 2016

**Catalog # D001033 - \$75 - Postage Paid**

**AIR TRAILS** - This magazine went under several names. The final issue was published in March of 1975. There are 435 monthly issues included in the complete set and priced as follows ---

D001010 - January 1937 through December 1943 - 84 issues - \$50

D001011 - January 1944 through December 1950 - 84 issues - \$50

D001012 - January 1951 through December 1961 - 132 issues - \$50

D001013 - January 1962 through December 1971 - 96 issues - \$50

D001014 - January 1972 through March 1975 - 39 issues - \$25

**AIR TRAILS ANNUALS** -

D001009 - 1938 through 1969 - All 25 issues - \$30

**D001015 - SPECIAL - Complete set including the annuals - \$200**

**MODEL AIRPLANE NEWS** - The first issue of this magazine was published in July of 1929 and it is still being published. We have the following collections currently available ---

D001002 - July 1929 through December 1942 - 161 issues - \$50

D001004 - January 1943 through December 1952 - 120 issues - \$50

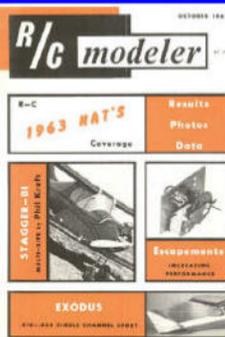
**MODEL BUILDER** - This magazine ran from the first issue of September~October 1971 through the final issue dated October, 1996 -

D001001 - The complete run - 295 issues - \$75

**FLYING MODELS** - The first issue of this magazine to use the name was published in June of 1947 and it is no longer published. We have the following collection currently available ---

D000013 - June 1947 through December 1963 - 123 issues - \$50

**RC MICRO FLIGHT & RC MICRO WORLD** - The complete run of RC Micro Flight, 1999 through 2004 and all issues of RC Micro World, 2005 through 2012 are available - D001016 - \$30



**RC MODELER** - Now available is the digital collection of the early issues of this magazine. The collection includes all issues from Vol 1, No 1 (October 1963) through December 1972. 109 issues all on a single USB Flash Drive.

**D001017 - \$50 - Postage paid**

**All prices include postage paid worldwide**

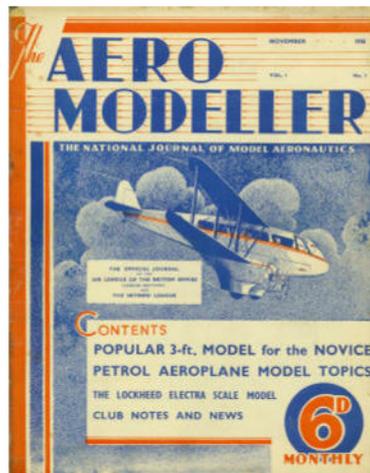
Send payment using Paypal to  
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**Circle your interests and give this sheet to**  
**someone who has a hard time finding you a gift**

Now Available!!  
The early issues of  
**AEROMODELLER**

Computerized in High Resolution  
On Custom USB Flash Drives



Now, after several months and hundreds of hours of work, we have available high-resolution digital copies of the British Aeromodeller magazine starting with the very first issue dated November 1935, shown above, and through the December 1942 issue. These issues are extremely rare and hard to find. These early issues are from the late Ivor F collection in Australia, with thanks to his son Tahn Stowe.

Furnished on our custom made USB Flash Drives this collection is priced at only \$60 US, postpaid world-wide. PayPal, Money Order or check drawn on a USA bank. Catalog number - D001047 - 85 issues -

Roland Friestad  
1640 N Kellogg Street  
Galesburg, Illinois, 61401  
USA  
[cardinal.eng@grics.net](mailto:cardinal.eng@grics.net)

P.S. - Don't forget to include your name and address - Sometimes people forget !!

