

RCMW-FSP

December 2015



Cover Photo of SNOW WHITE
by Kirby Hinson

IN THIS ISSUE

BIZZY BEE Micro RC
Whitman ALBATROS
SNOW WHITE OT FF
TRAVELAIR UC Scale
KOMAR ROG
Magazine Download

RCMW - INDEX

December 2015

Page 4 - 1/3 Scale Homebuilt B-17 - Electric Power Newsletter - Space Flight

Page 5 - Really Great Service on RC Transmitter - Nifty "Shop in a Box"

Page 6 - BIZZY BEE Micro RC construction article - Bob Aberle

Page 14 - BIZZY BEE plan

Page 15 - Whitman ALBATROSS article

Page 16 - SNOW WHITE construction article - Model Builder

Page 22 - SNOW WHITE plans

Page 26 - New Feature - Download a complete issue of MODEL BUILDER

Page 27 - TRAVELAIR construction article - UC Scale by Musciano - Air Trails

Page 30 - TRAVELAIR plan

Page 31 - KOMAR ROG from Aeromodeller

Page 32 - A Christmas Gift Idea for the Model Builder

Page 33 - Back Issue Magazine Collections

Subscribe to RCMW

RCMW is the only model airplane magazine that provides all plans as full size PDF files in every issue. All pages of the monthly online magazine can be printed out, including the full size PDF files, using your own computer printer.

If you like to build models you will appreciate the ability to see again antiques, old classics, reproductions of kits, as well as new designs made for the reliable, lightweight Micro RC equipment currently available.

If you are one of the "Buy-&Fly" fraternity and would like to learn how to build and repair models, RCMW is also the magazine to read.

Each issue is full of useful information rather than just a seemingly unending series of advertising for expensive models and equipment.

Subscriptions are \$24 for a full year of 12 issues and you can also download the previous 11 issues on a rotating basis if you wish.

To Subscribe, send \$24 via PayPal to cardinal.eng@grics.net

Don't use PayPal ? - Send \$24 US - (check, money order or cash) to ---

Roland Friestad
1640 N Kellogg Street
Galesburg, IL 61401
USA

For the Model Bulder and Flyer - December 2015 Issue



Full
Size
Plans



In the November issue I observed that Fall had arrived. Now, much too soon for this part of the country Winter has arrived as well. When I lived in Northern Minnesota snow storms in November or even October were no big deal but here in this part of Illinois, six inches of wet, heavy snow in mid November is a rarity. Good thing the snow thrower cranked right up. Maybe this winter I can get some model building done.

Bob Aberle has favored us with another of his Micro RC models, this time an adaption of the BIZZY BEE that appeared earlier as an old time free flight model.

If you remember the Whitman series of model kits you which were printed with a blue background to simulate the old fashioned blueprints that were common before Xerox copies, you may be a bit nostalgic about the Whitman ALBATROSS shown in this issue. A nice rubber powered endurance model, but the plan was not in good enough condition to give it to you full size. But Jim O'Reilly has done a CAD drawing and Bob Holman has a laser cut kit available. See the article for details.

SNOW WHITE has been considered for years as one of the prettiest models ever designed. The creation of Joe Raspante was shrouded in mystery until 1982 when the only one ever built was given to Al Holmes who laboriously disassembled the original and created a set of plans. See it here. Only a few have been built as it isn't an easy one to recreate, sort of in the vein of the Goldberg VALKYRIE. At 96 inches span it would take a lot of balsa and be a challenge - Wonder how a half-size version with a 48 inch span and electric power with RC would be?

Next up is a nice UC Scale model of the TRAVELAIR from the July 1950 issue of Air Trails magazine. Designed by Walt Musciano it would make an attractive addition to any UC flyer's stable.

KOMAR is a rubber powered ROG model from the pages of the June 1967 issue of Aeromodeller magazine. It's quite a bit larger than the usual run-of-the-mill ROG ships and might be a bit more stable in slightly gusty conditions. But it looks like a possibility for OOS flights too so be careful. Might not hurt to think about some sort of dethermalizer.

Long time subscribers know that I've been deeply involved in digitizing and archiving back issues of model magazines for many years. They are available as shown in the last two pages of his issue. A new feature is available on page 26 of this issue. You can download a complete issue of a magazine as a PDF file. It's interesting to see the articles, ads and of course the prices as they were years ago.

Sort of related to that is a notice on page 32. If you have someone who would like to give you a Christmas gift but has no idea what to get a model builder, you might want to print out pages 32, 33 and 34 and arrange to have them laying around "accidentally", possible even with certain items circled in an unobtrusive manner. Just a suggestion, of course.

Keep 'em Flying
Roland Friestad, Editor
cardinal.eng@grics.net



TOP SECRET

Here's a screen shot from the website of Jack Bally of his homebuilt 1/3 size B-17 Bomber that is getting closer to flying
To see more of this impressive project just go to his website at - <http://theballybomber.com/>
Since I'm not too far from him I have sent him an email asking if I could visit - Roland Friestad



There's an AMA chartered club called Electric Flyers Only (EFO) located in Commerce Township Michigan. Ken Myers, one of the movers and shakers publishes the monthly website called AMPEER which is available on request and has a lot of really great information about electric powered models. Take a look at it by going to www.theampeer.org

SPACE FLIGHT TAKES ONE STEP CLOSER

"Full reuse is a game changer, and we can't wait to fuel up and fly again" Jeff Bezos said. The "New Shepherd" spacecraft is designed to fly human passengers to suborbital space in the not so distant future. It passed its first test by successfully flying to space, reaching its planned altitude of 329,839 feet (100.5 kilometers), and then performing a vertical landing under rocket power back onto the launch site in Van Horn, West Texas on November 24, 2015. To see the video click on the link --- [CLICK HERE](#)

Great Service

Kudos to Horizon Hobby and Spektrum for Excellent Customer Service -- By Mike Myers

In early July, I managed to spill a glass of water on a six month old Spektrum DX9—and a three month old Dell laptop. The DX9 got most of the water. The DX9 has voice alerts, usually delivered in a nice female voice.

After the water hit it, it started to moo like a sick cow and did so until I disconnected the transmitter battery. I mailed the DX9 to Horizon Hobby's repair center in Illinois on a Friday. It was received on Tuesday, repaired on Wednesday and mailed back to me on Thursday. There was no service charge ("in the interest of customer relations"). They simply had me pay \$9.36 for the return postage (which was \$5 less than the post office charged me to send it to them).

The Dell laptop got very little water on the keyboard, but some frantic wiping of the keys resulted in the screen display rotating 90 degrees to the left—where it stayed. I contacted Dell for repair service, was told that water on the keyboard was not a warranty repair, and told to commit to a \$269 service charge for repair.

The "agent", probably speaking from a call center in India, could not give me an address to ship it to. I would have to wait until Dell sent me a Fed Ex box and shipping label. Seven full days after starting the process, the box is still not here, and I have no idea when it will arrive.

Once the box does arrive, I'll have to arrange for a Fed Ex pickup. Once the laptop is received at "Dell Wherever", repairs are supposed

to take 7 to 10 days. Even though I started the Spektrum repair process a day later, I expect I'll have my repaired radio back to me before Dell can even get me a shipping box.

Sad to say, this was not my first rodeo with a damaged radio. Earlier this year I managed to knock a Spektrum DX 7 transmitter off my workbench on to the concrete garage floor. That snapped the "stalks" off three switches on the top

of the radio. I sent it in to Spektrum—got it back in less than a week, repaired and "tuned up" at no charge. The radio was three or four years old and long out of warranty.

I'm not knocking Dell—their laptops are great. But when it comes to servicing a product Spektrum has them beat all hollow. Wish I wasn't so clumsy though.



These are screen shots from a youtube demonstration of a nifty multi-function tool that has at least 8 different functions and is touted as a workshop that you can carry with you. Watch to video demonstration which is certainly interesting but my impression is that it would be most useful for the light work for model building. The biggest problem other than the price would be the time you spent switching from one setup to another - But the fellow doing the demonstration certainly makes it seem easy. Watch it by clicking on the link.

[CLICK HERE TO SEE THE VIDEO](#)

BIZZY BEE-100

by
Bob Aberle

BACKGROUND

This particular aircraft was requested by Australian modeler, Andrew Burston. Andrew is a sport flyer and concentrates more with park flyer size models. His recommendation was for me to revisit a 1974 design that appeared in the old RC MODELER magazine. It is called the **BIZZY BEE**. The plane was designed back then by Albert Y. Oda.

The original size had a 27 inch wing span and an area of 145 square inches. Power was supplied by a Cox Babe Bee .049 glow engine with a throttle. Flight controls were rudder, elevator and engine throttle. The original weighed around a pound, which seems really heavy for this size aircraft.

CHANGES MADE to ORIGINAL

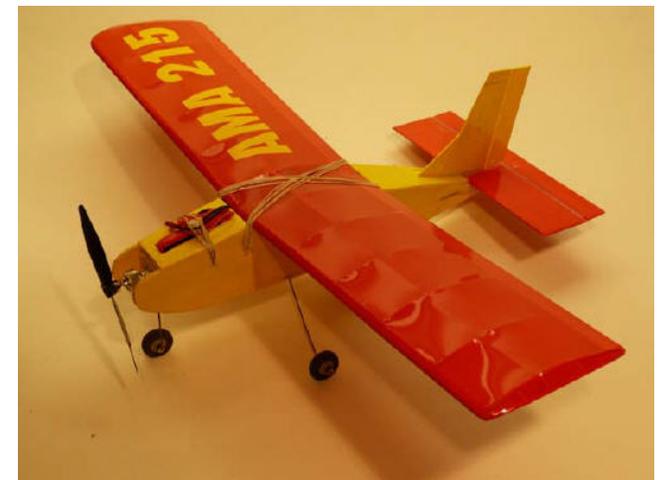
This first photo shows me holding the finished, modern day, **BIZZY BEE**. The very small size is obvious in this photo.

First of all, for this presentation, the original 145 square inches of wing area was reduced to 100 square inches. The wing span went from 27 down to 22 inches. The original had a lot of wing ribs. I reduced the number of ribs to half of the original.



The original dihedral was 5 degrees. Usually these vintage planes had closer to 10 degrees. My feeling is that the lower dihedral on this plane, resulted in the excellent performance.

As I always do, the vertical fin was increased in size. Also the nose was slightly lengthened. There will be more comments on the CG later in this article. Final weight ended up at 5.5 ounces. Here are two photos of the finished BIZZY BEE-100.



RADIO and POWER SYSTEMS

The next photo shows both the RC and Power System components. I had originally decided on a Lazertoyz 2 cell 250 Li-Po battery pack, which weighs 0.57 ounce. But I still ended up a little tail heavy, so I substituted a Cheetah (BP Hobbies) 2 cell 360 mAh 35C Li-Po battery at 0.9 ounce. Doing this the total equipment weight rose from 2.19 ounces up to 2.52 ounces. Back tracking from the total plane weight of 5.5 ounces, the RC/Power System weight was 2.52 ounces and the plane weight was 2.98 ounces, which yields the total weight of 5.5 ounces.

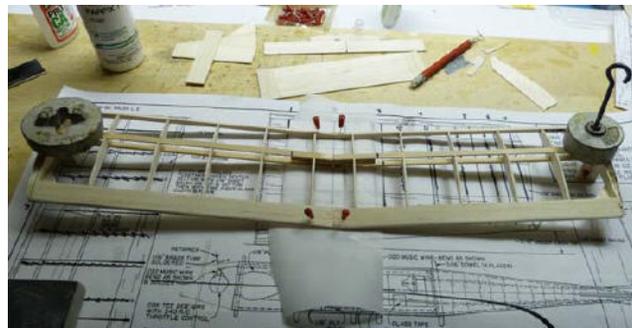
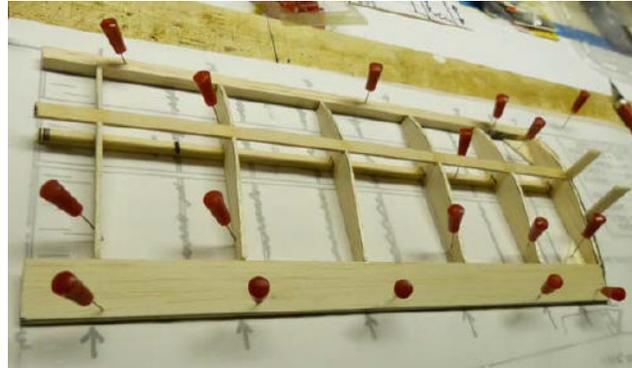
The Spektrum AR500 receiver was new to me. I didn't expect such a long antenna on such a small receiver. I assume the benefit is longer range, but with such a small size model you aren't going to go very far before losing sight of the plane.

The Lazertoyz brushless motor and the HK Turnigy 10 amp ESC did not come with any connectors. So you will have to do some of your own soldering.

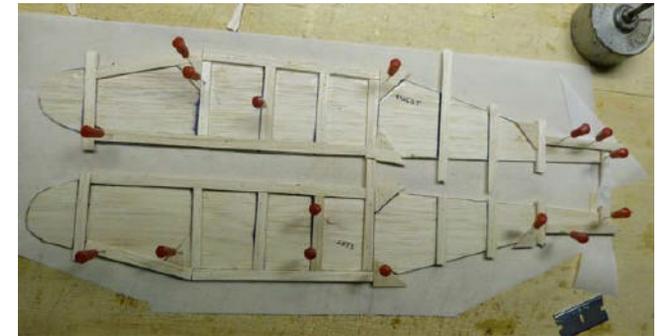


Because of the reduced number of wing ribs I decided to use 1/16 X 1/4 basswood or spruce for the two main spars. It makes the wing a lot stronger. This kind of hardwood can usually be found at nationwide crafts stores, like A.C. Moore and Michael's.

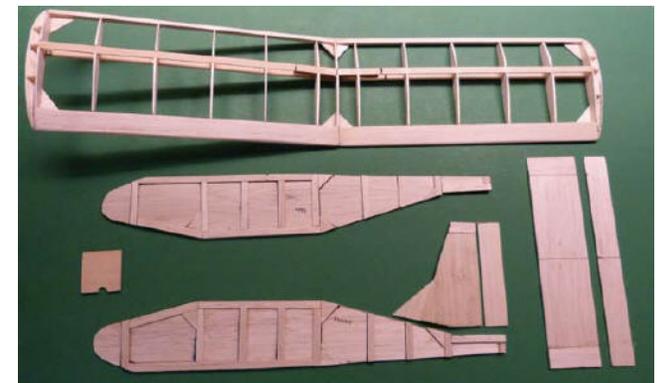
The trailing edge is made from two pieces of 1/16 inch balsa. Wing construction photos follow.



Now for the start of the fuselage. A lot of 1/16 X 1/4 balsa stiffeners and doublers strengthen the 1/16 balsa fuselage sides.

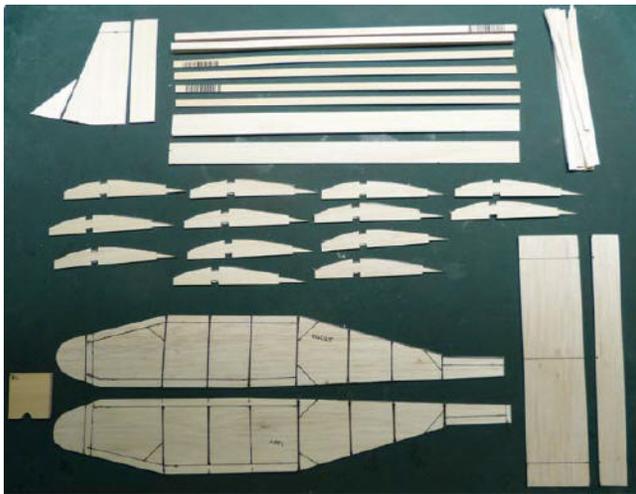


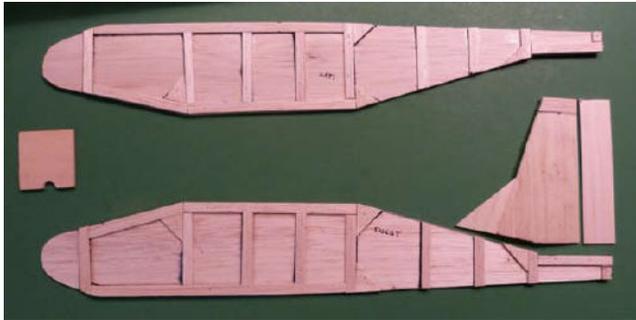
Starting to take shape. The 1/16 inch balsa stab, elevator, vertical fin and rudder are added, it tends to look like an airplane.



CONSTRUCTION NOTES

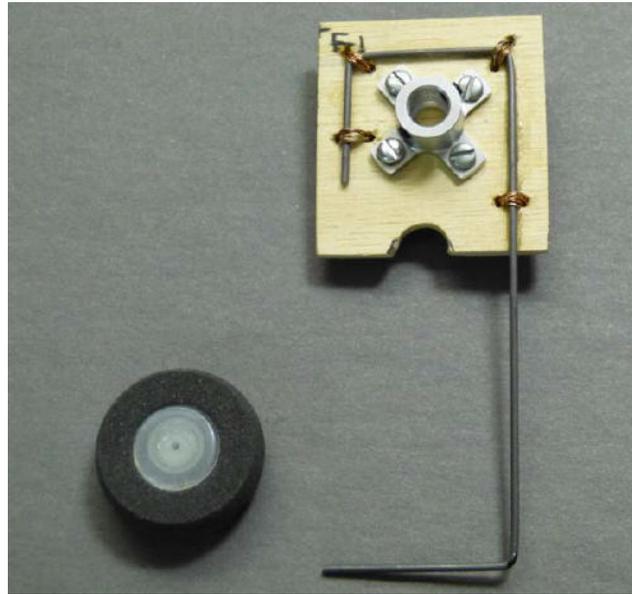
Here we go! My usual "kit" photo. A couple sheets of 1/16 inch balsa gets you an airplane.



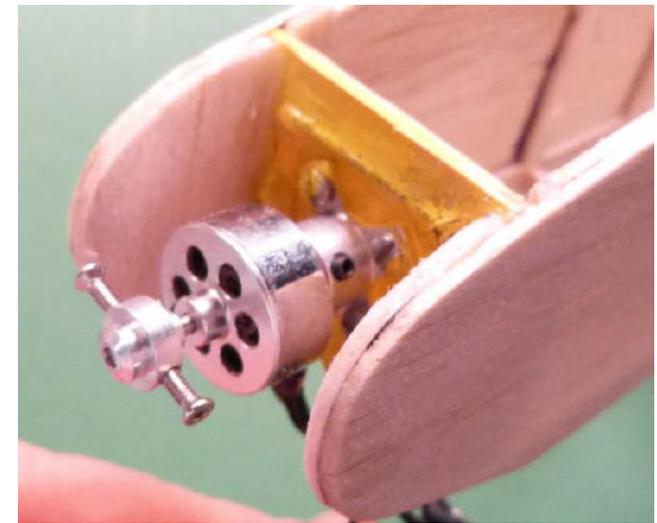
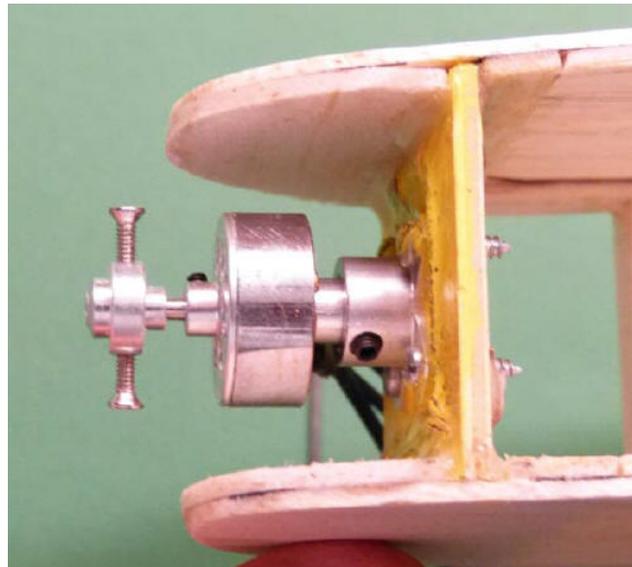


Now you can work on the firewall, nose gear and motor. The firewall is made from 1/8 inch plywood. Make sure you cut a notch for the passage of the three motor wires.

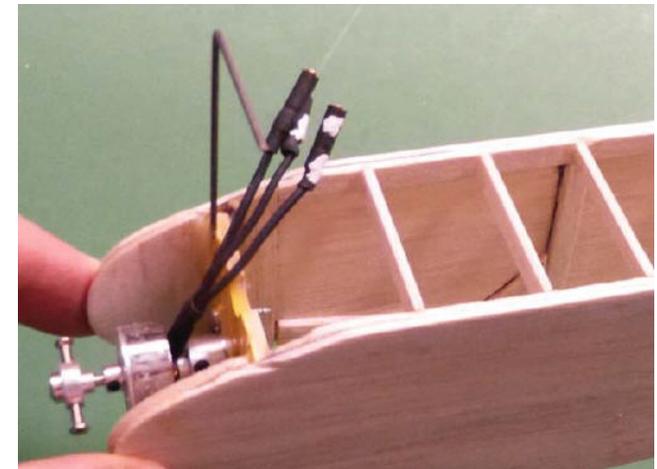
The nose gear is fashioned from .047 inch diameter wire. It is attached to the firewall with thin, soft, copper wire along with 5-minute epoxy cement.



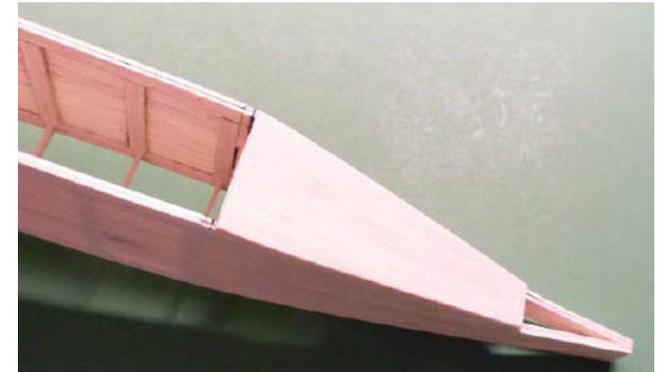
The firewall is installed to the fuselage sides with the help of epoxy cement.



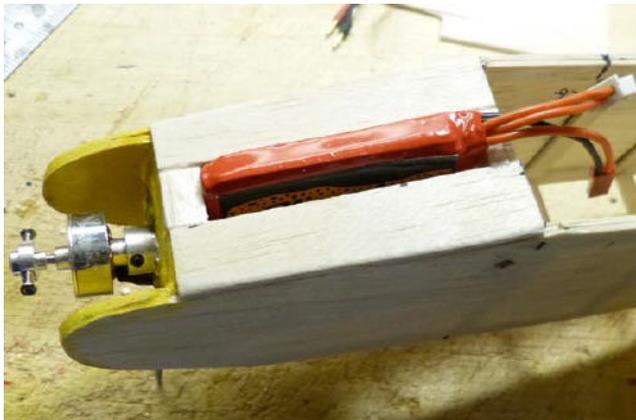
Fill in the rest of the cross pieces.



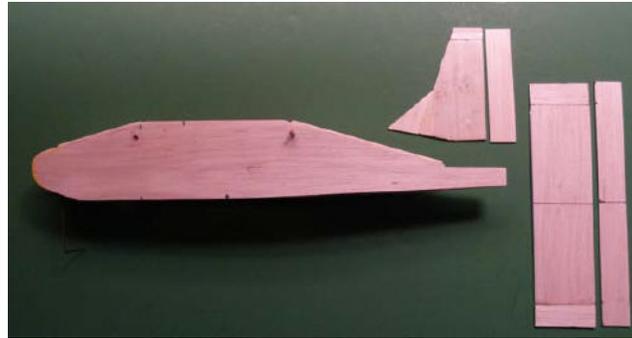
Add this top piece of 1/16 inch balsa.



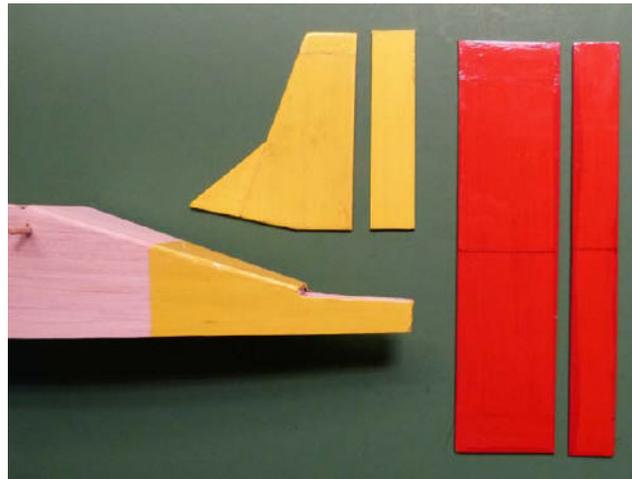
The battery compartment is located on top of the fuselage, between the firewall and wing leading edge. It is constructed totally from 1/16 inch medium weight balsa. The battery gets inserted from the top.



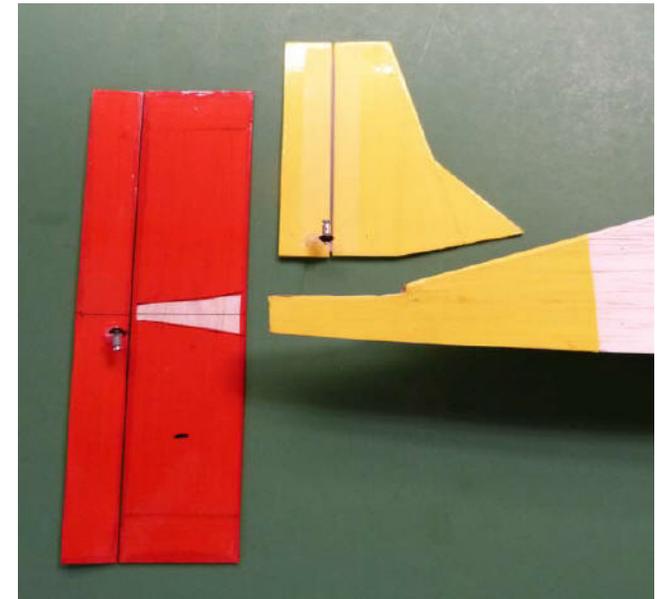
The next sequence of photos shows my technique for covering and installing the tail feathers (stab, elevator, vertical fin and rudder. This is the starting point.



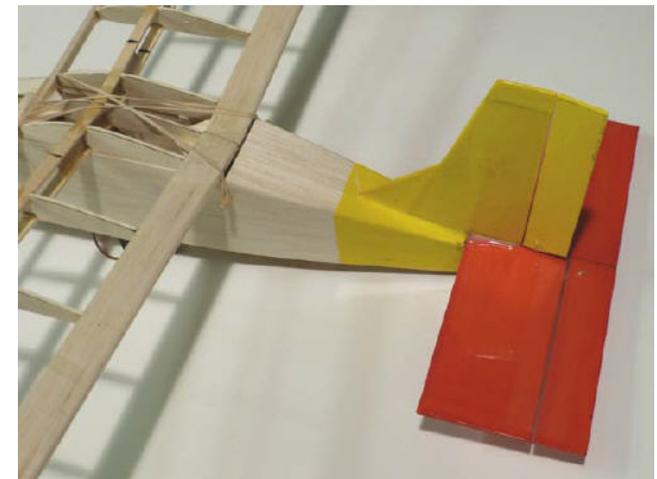
Cover the tail pieces and the rear of the fuselage with BP Hobbies Solite iron-on covering material.



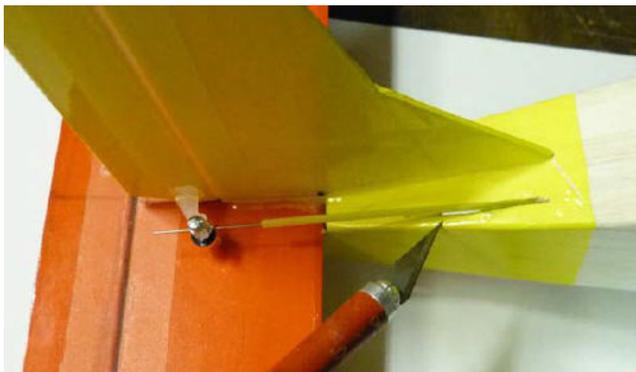
Add the Dubro electric flyer hinge tape (#916) and the Micro Control Horns (#919). Remove the covering in the area where the stab comes in contact with the fuselage.



Attach the wing with several rubber bands. Then align the stab and fin with respect to the wing. Hold the tail surfaces firm with a few drops of CA (thick) cement. Then as a final measure coat the joints with 5-minute epoxy cement.

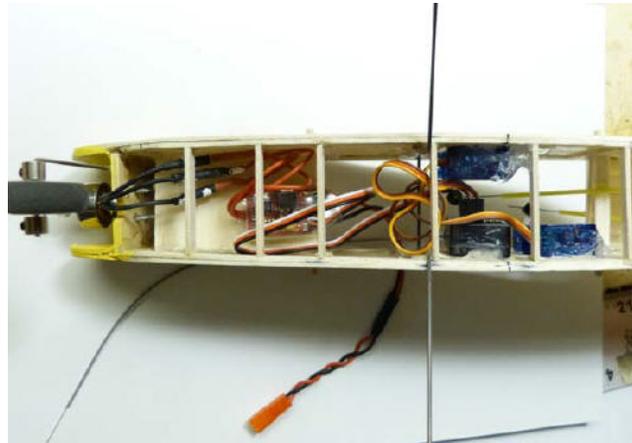


The final item in this sequence involves cutting the slots for the passage of the Stevens AeroModels .073 inch diameter Teflon tubing and the .020 inch diameter wire that runs inside that tubing. One slot is for the rudder and the other for the elevator. By covering the rear end of the fuselage first, then installing the control rods, you will not be applying any heat in the area of the Teflon tubing. In the past I had accidentally melted the tubing such that the wire couldn't move inside the tube. The result was a "stalled" servo causing high current drain. This installation technique is so important on these small models that I'm going to repeat it in my FAQ column that appears regularly in the MODEL AVIATION magazine.



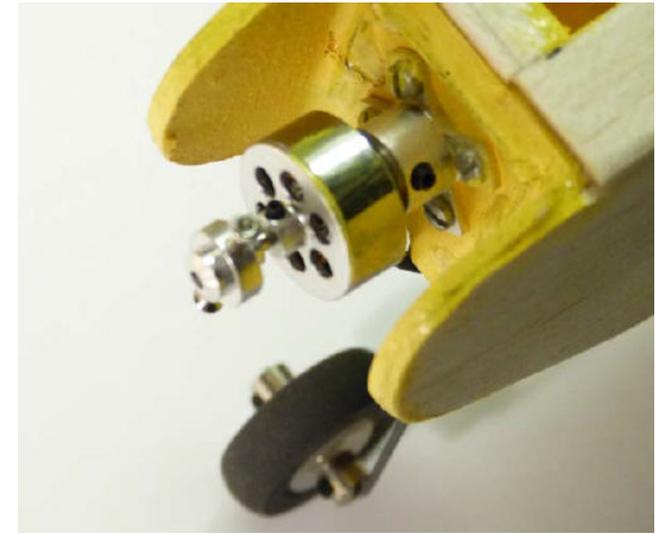
At this time you can make up the main landing gear strut from .047 inch diameter wire. I chose DuBro 1 inch diameter Mini-Lite wheels (#100MW) along with 1/16 inch diameter Micro Wheel Collars (#944). The gear press-fits in place and is affixed with 5-minute epoxy cement.

I did find that on my prototype aircraft that I placed the main landing gear a little too far forward. This made the plane sit on its tail. On the final plans I moved the gear rearward by a 1/2 inch. Doing that all future BIZZY BEE aircraft will sit on the nose wheel.



This overall photo of the fuselage, without the bottom sheeting in place gives you a rough idea as to how the equipment is located. At the extreme left is the motor. Next comes the battery (on top) and the ESC on the bottom. Then the receiver with the elevator servo opposite and finally the rudder servo.

This is a close-up of the motor mounted to the firewall. The metal motor mount is provided with the motor along with the prop saver adapter.



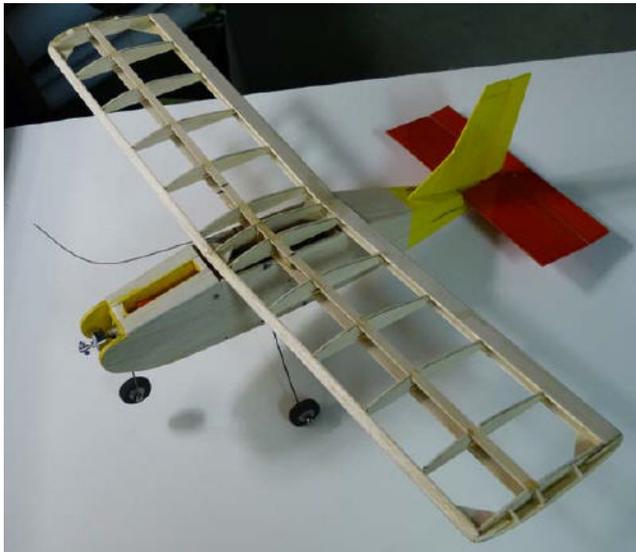
This next photo shows the location of the two servos and the receiver. All three items were held in place with double sided mounting tape, followed by an application of Permatex Clear RTV Silicone adhesive.



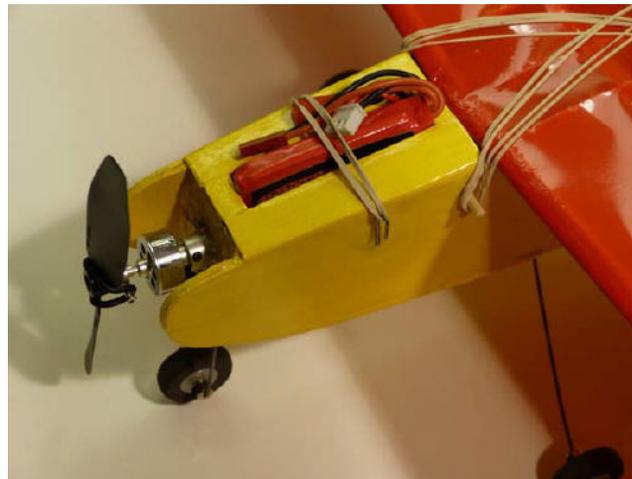
The ESC sits below the battery compartment floor. It is also held in place with double sided tape.



Make sure that you install cross pieces that brace the control rod sleeving as it goes from the forward servo position back to the control surface horns. Failure to secure these two control rods will give you some terrible control problems later on.



The BIZZY BEE ready for the remainder of the iron-on covering application (wing and the rest of the fuselage). And here's the finished BIZZY BEE, ready for its first flight.



The two cell 360 mAh Li-Po battery, held in place by a single rubber band.



The underside of the BIZZY BEE.

FINAL CG and CONTROL THROWS

Allowing for the reduction in size, my CG location worked out to a spot 1-3/8 inches back from the wing leading edge. Despite the fact that I lengthened the nose somewhat, I did end up a little tail heavy.

So to make up for that I swapped a 2 cell 360 mAh Li-Po battery pack (weighing 0.9 ounce, for the original 2 cell 250 mAh pack (weighing 0.57 ounce). That small increase in weight was all I needed to achieve the CG location shown on the plans. I still ended up with a very light total weight of 5.5 ounces. With 23 watts input power, that worked out to a power loading of 61 watts/pound which was more than enough for this sport flyer.

Control throws ended up with the rudder moving 3/8 inch either side of the neutral position and 1/4 inch either side for the elevator.

FLYING

I did dial in about 25% expo rate control on both the rudder and elevator. As always Tom Hunt takes the first flight, while I man the camera. Then after that first flight we swap and I pilot and Tom takes the photos. In this next photo Tom has just released the BIZZY BEE on its first flight.



Tom felt this was one of my very best flying micro designs to date. It's smooth and responsive. I did prior to the first flight put in about 3/16 inch of washout in both wing tips. That means the trailing edge was lifted up about 3/16 of an inch. You can do that with the help of a heat gun. There was no tendency to stall at slower approach speeds.

Next are three flight photos of BIZZY BEE.



SUMMARY

I had thought that this plane might not turn out to be such a terrific performer. When you have a close coupled wing and stab, as it is here, you usually get a very “jumpy” aircraft. But surprisingly that wasn't the case with this plane. Like I said already, it's really smooth!

I don't usually say this, but this little gem should be a prime candidate for a laser cut parts kit. Scratch building it was a snap, requiring only several days effort. But a kit would make it all the more easy.

I also expect to fly my BIZZY BEE indoors in a double size gymnasium during our winter months. Outside it easily handled approx. 4 to 7 mph winds.

I have to leave you with a parting few words. At 77 years of age, I'm starting to get some health issues that take more time from my hobby efforts. I'm not giving up, but I can't see myself maintaining a monthly schedule of construction articles.

I do promise to answer any of your questions concerning any one of my 65 designs that appeared during the last ten years in RC MICRO WORLD.

Bob Aberle
baberle@optonline.net
(even when in Florida)

SPECIFICATIONS

Model: "BIZZY BEE-100"

Designed Originally in 1974 by Albert Y. Oda, and published in the RC MODELER magazine. The original had a 27 inch wing span and 145 square inches of wing area. For this presentation the span was reduced to a 22 inches and 100 square inches of wing area.

Type: A vintage RC sport design now revisited as an electric powered RC indoor or Park Flyer.

Wingspan: 22 inches
Wing Area: 100 square inches
Length: 16 1/2 inches
Weight: 5.5 ounces
Wing Loading 8.0 oz/sq.ft.

RC GEAR USED

Horizon Spectrum DX-7 transmitter operating on 2.4 GHz, a Spectrum AR500 5 channel sport receiver and two Hobby King HXT 500 5 gram micro servos operating the rudder and elevator.

POWER SYSTEM USED

Lazertoyz 1800-20 10 gram brushless out-runner motor, GWS 5 X 4.3 prop, Hobby King Turnigy 10 amp brushless ESC and a BP Hobbies Cheetah 2 cell 360 mAh 35C Li-Po battery pack (0.9 ounces)

POWER SYSTEM PARAMETERS

Prop: GWS 5 X 4.3
Motor current: 3.09 amps
Voltage: 7.62 volts (under load)
Power Input: 23 watts
Battery Loading: 5.5C
Power Loading: 61 watts/pound

Flight Time: 7 minutes but with some motor throttling you can expect up to 10 minutes.

SOURCE REFERENCES

BP Hobbies - CA cement, CA accelerator, Solite covering material, 5 minute epoxy cement, GWS prop and a Cheetah 2 cell 360 mAh 35C Li-Po battery -- www.bphobbies.com

Callie Graphics - AMA license number decals -- admin@callie-graphics.com

DuBro - 1.00 inch diameter Mini-Lite Wheels (#100MW), micro control horns, mini EZ connectors, electric flyer hinge tape and 1/16 inch wheel collars -- www.dubro.com

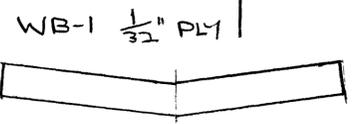
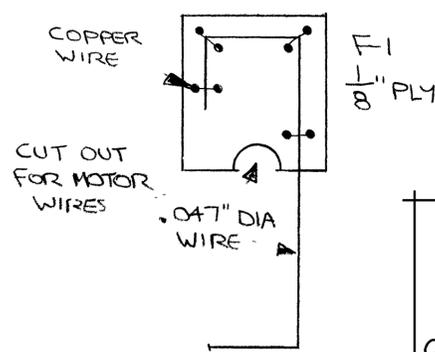
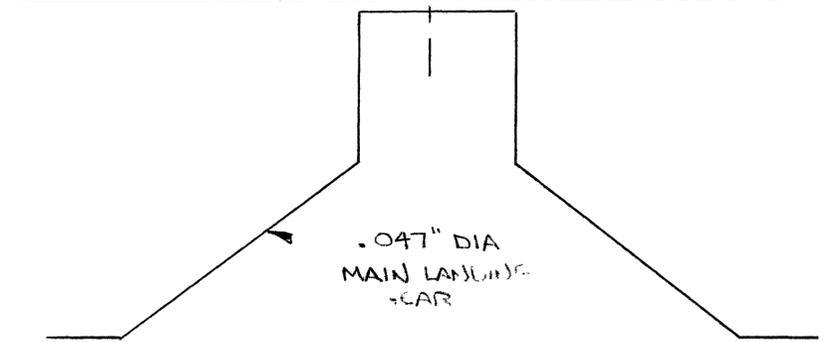
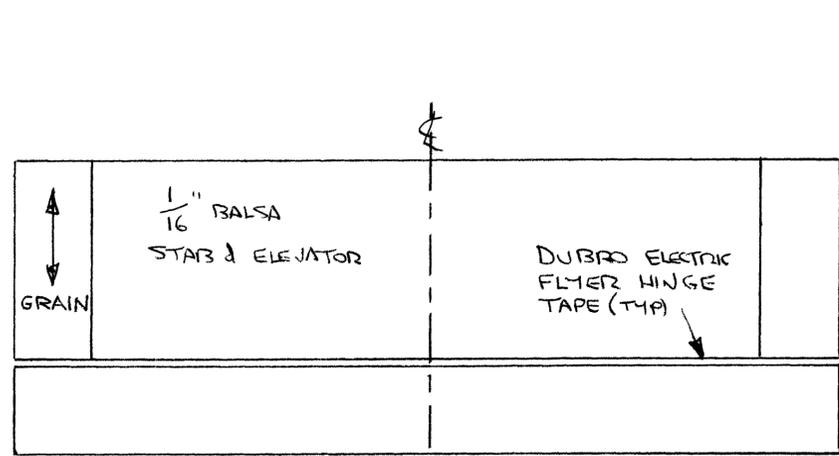
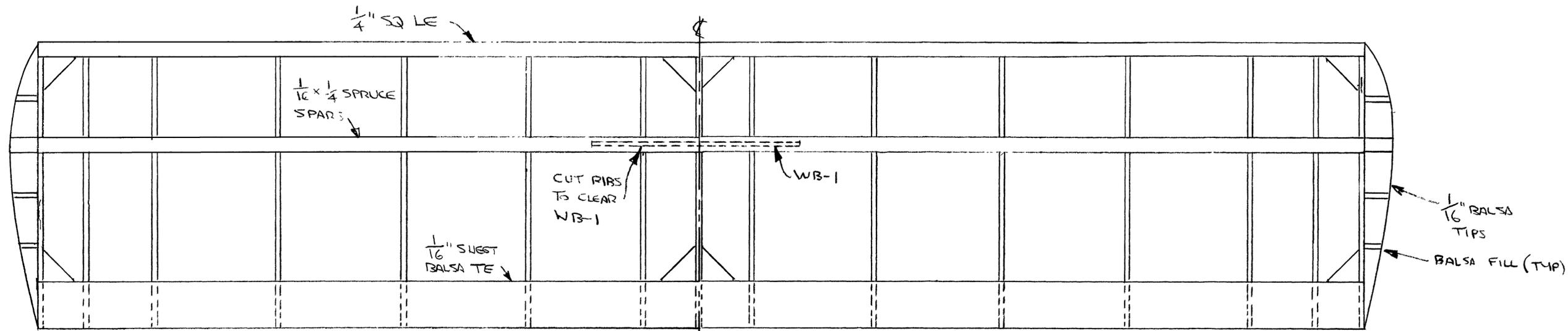
Hobby King - Two HXT 500 5 gram micro servos and a Turnigy 10 amp brushless ESC -- www.hobbyking.com

Horizon Hobby - Spectrum DX-7 transmitter and a Spectrum AR500 receiver www.horizonhobby.com

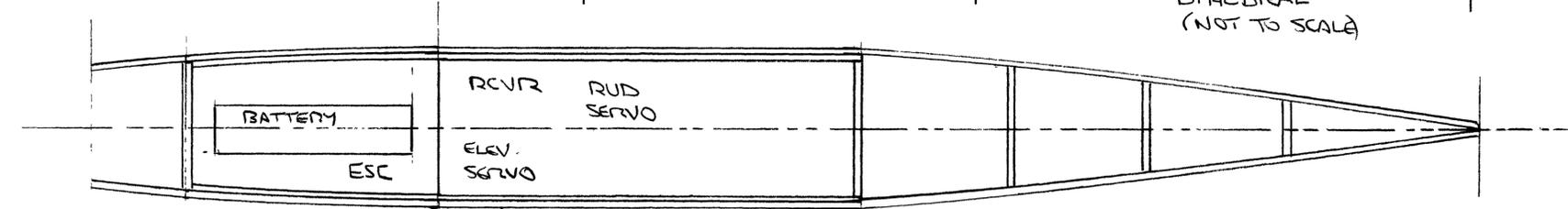
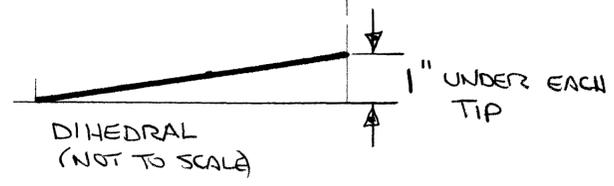
Stevens Aero Models - .073 inch OD Yellow Teflon tubing for the elevator and rudder control rods http://stevensaero.com/shop/product.php?product_id=16639

SWAMP
by Gary Clark

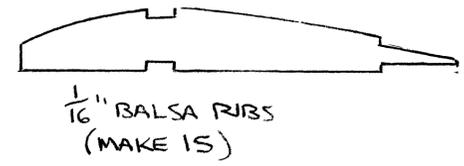




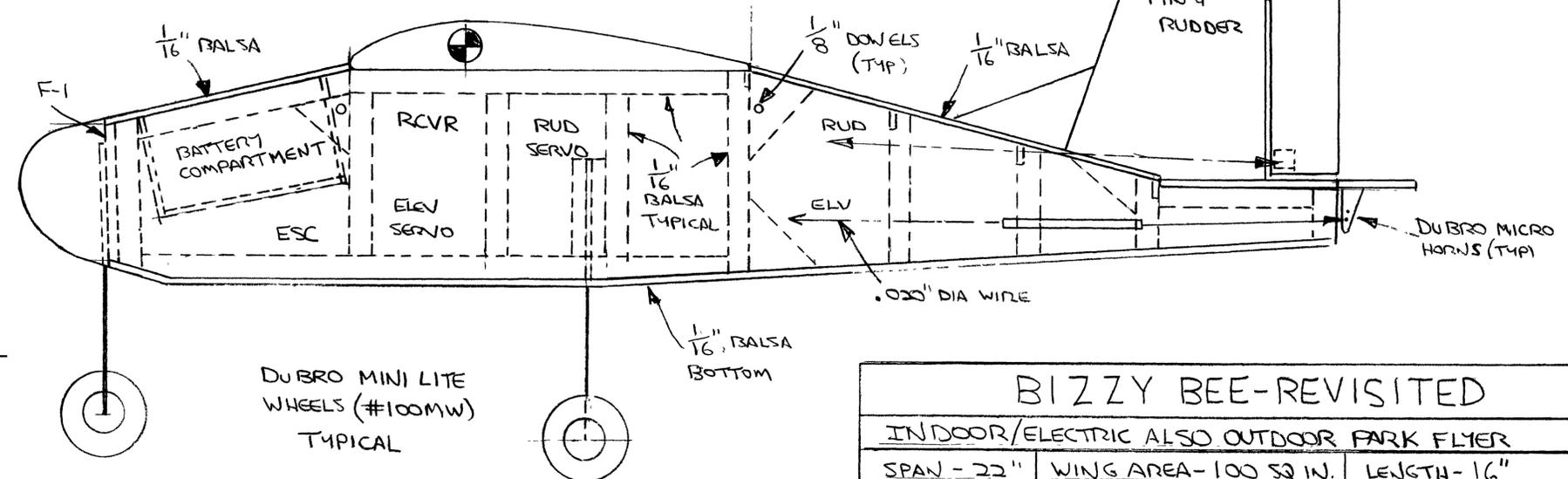
CONSTRUCTION ARTICLE IN
RCMW-FSP DECEMBER 2015
www.fullsizeplans.com
CLICK HERE TO GO TO WEBSITE



LAZERTOYZ
1800-20 10 GRAM
BRUSHLESS MOTOR
GWS 5x4.3 PROP



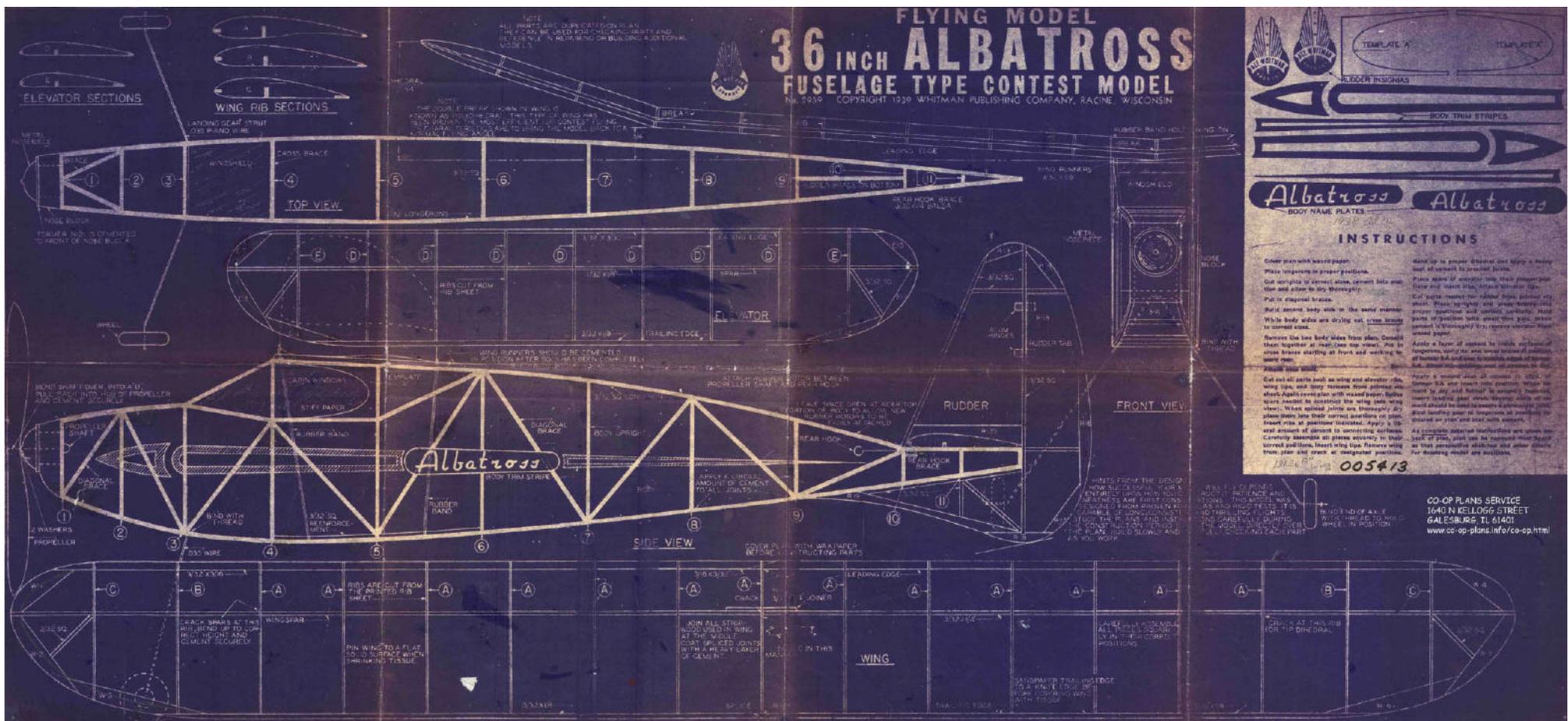
ALL TRIANGULAR GUSSETS - 1/16" Balsa



ARCHIVE #003692
COOPERATIVE PLANS SERVICE
www.co-op-plans.com
COPYRIGHT 2015 - NOT FOR RESALE
PLEASE DO NOT POST ON THE INTERNET
CLICK HERE FOR INFO & FREE PLAN LIST

BIZZY BEE-REVISITED		
INDOOR/ELECTRIC ALSO OUTDOOR PARK FLYER		
SPAN - 22"	WING AREA - 100 SQ IN.	LENGTH - 16"
23 WATTS INPUT POWER	61 WATTS/lbs POWER LOADING	
0	2	3 4 5 6

Bob Stueb 11/6/15



Here's a fond memory for you older guys (like myself). Remember those Whitman models with the plans that were like real blueprints with the lines in white and the background in blue? The ALBATROSS plan shown dates from 1939 and during WWII Whitman produced a whole series of rubber powered scale models of warplanes.

They were available in hardware stores and dime stores (remember those) and were usually priced at about 25 to 50 cents.

The photo of the completed model comes from the Pensacola Free Flight Team website and according to our information was built by Paul Grabski.



Jim O'Reilly is making a new CAD drawing using the above original plan as a template and Bob Holman, who makes laser cut kits will be providing a kit for it. Contact them for more information on cost and delivery.

Jim O'Reilly's website is shown below. Click on the link to go there --

www.jimoreillymodelplans.com

For information on the laser cut kit go to Bob Holman's website using this link --

www.bhplans.com

If any of our readers have other Whitman plans that could be shared with our subscribers please contact me, Roland Friestad. My email address is --

cardinal.eng@grics.net

Plan from the David Baker Heritage Library

THE REAL SNOW WHITE!

By AL HOLMES . Instead of OLD TIMER of the Month, this is "OLD TIMER of the Century"! Joe Raspante's classic Beauty Winner has been the center of some controversy as to her parentage. This article, and the accompanying plans, should straighten it all out.

Note from the RCMW Editor -- This is a reprint of the August 1982 article in Model Builder magazine and references to the editor in the text refer to Bill Northrop, editor of Model Builder.

INTRODUCTION BY THE EDITOR

This article has been in the works for quite a while. In fact, Al Holmes has worked on the plans over a period of five years. Until recently, there didn't seem to be any controversy involved. Snow White was simply a very beautiful gas model, designed and built by Joe Raspante in 1937-1938, which went on to win many beauty contests, where flying ability was also an important factor.

Its beauty has remained timeless, and down through the years, it has been considered by many modelers as something very special, something revered, something with a mystique and aloofness, mostly because it could not be duplicated ... no plans, no kit.

Beginning with the April '82 issue of **MB**, Bill Effinger's WE. Technical Services advertised the Snow White "20", stating that it was a 3/4-size version of Joe Raspante's model, as designed by Bill Effinger.

Model Builder also published a photo of the original Snow White in the March '82 R/C World column, in which the caption, supplied by Bill Effinger, "clarified" the fact that Snow White was his design.



Meanwhile, discussion with Al Holmes, who was in the process of finishing up the labor of love published herein, indicated that he believed S/W was Joe's design! We asked Al to get with Joe and try to clear up the confusion before we published the Snow White plans.

However, along comes the June '82 issue of Model Aviation, with a story on Snow White which adds more confusion to the situation, particularly the three-view which is supposed to be a 3/4-size version of the original model.

This lit a fire under Al and **MB's** editor, to get the real Snow White published as soon as possible. With that introduction, we now turn the podium over to Al Holmes.

• • •
"MIRROR, MIRROR ON THE WALL. WHO'S THE FAIREST OF THEM ALL?" "SNOW WHITE!"

Yes, SNOW WHITE is alive and well on Long Island! To my knowledge (and I've been building models for more than 40 years), there has never been a model to attract so much attention with so little exposure.

Consider this, only one Snow White has ever been built, that was 45 years ago. Its contest record was nothing short of astonishing. In every contest the Snow White has entered, it won! This includes the prestigious Berryloid competition at the 1939 nats.

Today, the Snow White is in the center of a controversy. That is; who truly designed her? At this point I won't try to sway you in any direction, or bless you with the pearls of my conclusions. Rather, I will list what I have found out about Snow White over the past five years (that's

how long I've been working on the plans). Keep in mind how difficult it is to uncover a 45 year old truth.

THE BEGINNING

Early 1937, in Joe Raspante's radio repair shop, on Atlantic Avenue in Brooklyn, New York, Joe sat racking his very inventive brain for some inspiration for a new airplane; one with a new look about it, classic, graceful, and large. In walks a friend and member of the same model club (Majestic Gas Model Club), Bill Effinger (Bill was the moving force behind Berkeley Models).

As Joe recalls, it went something like this: Joe said, "I've been sitting here trying to come up with something new to enter in next year's Beauty Contests. Want something big, like Ben Shershaw's 'Cavalier'. What do you think?" Bill took out a pencil and on a slip of scrap paper sketched the outline of a likely model.

Joe took the sketch home after closing the shop that night. Over the course of the next two or three weeks, Joe engineered, refined and gave birth to Snow White on the backs of old, flattened out, brown paper bags. Joe said, "Indeed, I give Bill Effinger credit for the idea, the inspiration, that gave me Snow White, but in NO WAY did he ever contribute to the actual design of the Snow White!"

Now that I have everyone's hackles up and divided into two camps, let's define "DESIGN".

DESIGN: used as a basis for anticipating practical problems and solving them at the engineering stage.

DESIGNER: one who plans, produces, or creates utilitarian or aesthetic objects.

(Ref. Webster's Third International Dictionary)

I would say, if this is what "DESIGN" means, then Joe is indeed the "DESIGNER". Now if you haven't guessed already, I firmly believe, that without a doubt, Joseph M. Raspante is the one and only designer of the famous SNOW WHITE!

This is not intended to shoot anyone down, least of all a man who has made the kind of contribution to model aviation Bill Effinger has, but to give credit where it's due!



At the 2011 SAM Champs, the hit of the show was this magnificent SNOW WHITE model built by Richard Minnick. It won the Best of Show award and Best RC Model award at the Concours d'Elegance Photo from Kirby Hinson

I believe Joe would have given the Snow White to anyone who wanted it, providing they could come up with a set of plans. After all, he gave her to me and all I did was ask!

Now take a look at page 47 of the June '82 issue of Model Aviation and you will see where Bill Effinger said the Snow White was not a great flyer, powered with the Brown Junior.

Bill would be more than correct in his estimate of flight performance if the large and heavy Snow White was indeed powered by a Brown. The fact is, it was powered (and very ably) by a Forster "99". Surely, the designer would remember that! (Sal Taibi recalls that Joe did try a Brown, found it was inadequate, and went to the Forster 99. Sal says it was a fine flier. wcn)

Joe's reason for not flying Snow White every weekend and in open free flight competition was a simple one. The ship was a "Beauty" model and he didn't want it smashed up, or end up in the trash as did most competition ships (then and now).

For you under 40 types, who may not know about "Beauty" events at contests, I have to mention that even "Beauty" models had to make qualifying flights. In other words, you had to fly to win, it was not a static display!

Let's turn to page 107 of this M.A. feature, paragraph two, where it states, the full sized Snow White has a 90 inch wing span. Wrong again, it has an eight foot wing span (that's 96").

Last, but by no means least in my case for Joe Raspante, turn back to page 46 and take a casual (not careful and close) look at what Bill Effinger calls the "redesigned Snow White 20", O.K.?

Now look at the plans pictured in this Model Builder article. I say to you, there is no way that the "20" is a copy of the Snow White, re-design, reduced or otherwise! You be the judge! As far as I am concerned, one is Snow White and the other the Wicked Witch!

There can be no doubt about the authenticity of the Snow White plans herein, they were drawn by taking apart the only Snow White ever built and tracing the parts.

"MIRROR MIRROR ON THE WALL... WHO IS THE FAIREST OF THEM ALL?"

Now that I have the debate out of the way, let's talk models. I first saw the Snow White in a book at the Baltimore, Maryland Public Library, when I was a boy.

The book in which it was pictured was, The Theory of Flight by Air Age Inc. This was late in 1941. I know it was in December 1941, because I had asked my Mom and Dad to give me this book as a Christmas gift. This was not just any December, way back when, but December, 1941. You see, my Dad was a career army officer, and I recall he was more concerned about the war we had just entered, than model airplane books. (I got the book anyway).

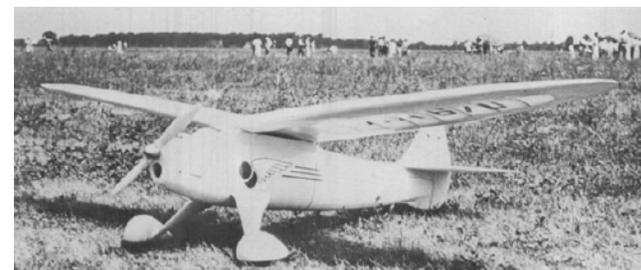
In this book, on the first page, was a full page photo of Joe Raspante's "Snow White". It was love at first sight. However, some 36 years would go by before Snow White would enter my life again.

It was the summer of 1977. I was reading a 1938 copy of Model Airplane News, that belonged to a collection of a good friend, Tom Feicco. I couldn't believe my eyes when I saw Joe Raspantis name in the caption.

The next day I called Joe and asked if he still had the plans. My heart sank when he said no. He explained the drawings were done on brown paper bags, and after the model was completed, they were discarded.

I understood how that could happen, because in my own miss-spent youth, I used to tape pages of loose-leaf notebook paper together to make sheets large enough to draw plans on. I designed and built a lot of airplanes back then, and if my life depended on it, couldn't come up with a set of plans today.

Needless to say, I felt great disappointment. However, Joe's next statement was, "I think I still have the Snow White somewhere up in the attic. If it's still there you can have it."



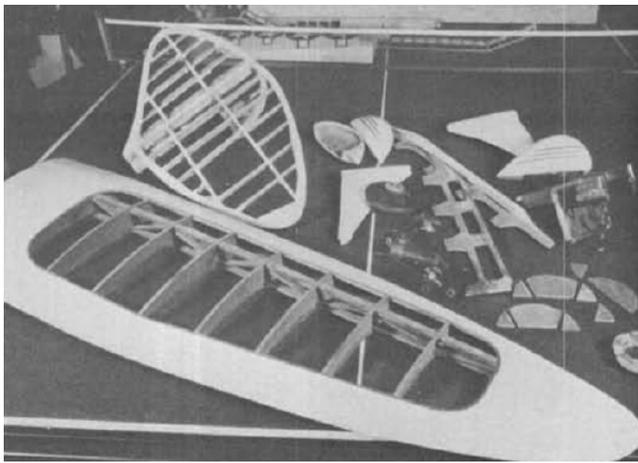
Burning rubber all the way to Joe's house, I arrived before the phone line had cooled off. There, in Joe's immaculate shop (more about the shop later) was that beautiful ship I had fallen in love with so many years before. It was like going home again.

My thoughts filled with boyhood memories of the Sunday contests at Model Haven. Nostalgia dripped from every pore. The next step was to figure out how to draw an authentic set of plans, without destroying that magnificent old girl.

Snow White sat on a drawing table, in my studio, for two months or more, while I contemplated my next step. Finally I came to the agonizing conclusion; the only way to save Snow White for future generations of modelers was to systematically destroy her!

The next morning, I called Joe with the bad news. Without any hesitation he said, "Do whatever you have to do, but let's make her live again."

The model was in fairly good condition considering it had spent the past 20 years or so in the attic, with temperatures as high as 110 degrees in the summer and as low as 0 degrees in the winter. At one point, it had even been used as a tricycle by his grandson!



There was almost no silk at all on the open frame work, none at all on the wings. The exposed wood was in very bad shape, dry, broken, it almost crumbled at the touch.

The wing seemed a good place to start, so after selecting the one in the best condition, I carefully traced the wing outline, both panels. The rib locations were marked in position.

Using thinner and model knife, I began removing the top planking, thereby exposing the structure beneath. Then the trailing edge and wing tip pieces were removed, dried, and sanded.

A large razor saw was used to cut through the spars and leading edge to remove the ribs. The spar sections, leading edge chunks and cap strips were then removed from the ribs using thinner.

Most of the ribs were in poor shape and care had to be taken not to destroy them. In a few cases the ribs had to be "rebuilt". After the set of ribs was assembled and sanded smooth, the wing parts were traced.

None of the parts of Snow White, except those made of plywood, were worth saving, so no effort was made to save anything.

The other day I was talking with Joe and asked how he plotted the wing ribs. He laughed, and then described an incredibly simple procedure. I must confess it would never have occurred to me in a hundred years.

After selected a suitable airfoil, you make one rib out of balsa or even cardboard. Using a D.C. light (A.C. will not work), you adjust the distance between the rib and the light. The resulting shadow will give you a perfect rib outline, of whatever size you want. This is an indication of how the inventive mind of Joe Raspante works.

The tail group was next in line for disassembly. Using the same technique as with the wings, it proved to be much simpler to put down on paper.

While we're talking about the tail, check the really neat Track and Key method used to align and hold it in place. The only rubber bands needed are between the two hooks, on the bottom of the sub-rudder.

The most difficult task was taking apart the fuselage. You can learn a lot about a modeler by taking apart his airplanes. The strip planking was just unbelievable, every strip was carefully tapered to an exact fit. There was not one trace of wood filler.

All the fillets were carved balsa wood. All the markings on the ship were hand painted. No masking tape or decals were used; the pin stripes were hand painted. There were traces of an AMA number on the cap strips. They too were hand painted, red numbers and letters with a black outline.

The entire ship was covered with white silk. The fuselage and tail were painted all white, the wing was painted white on the planked area only, the open area of the wing was clear doped.

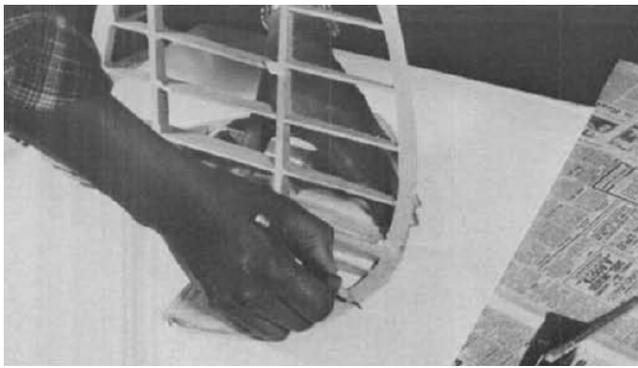
Around the edge of the open area of the wing was a hand painted red line, about 1/8 inch wide. This is "Craftsmanship" with a capital C.

It was just about impossible to remove the strip planking with thinner, without damaging the structure beneath. So out came the razor saw again. The fuselage was taken apart one bulkhead at a time, starting at the tail.

The distance between the formers was carefully measured at the time of removal, and that information transferred to paper. This way the airplane kept getting smaller and the drawings kept getting larger.

Using this method, there is no chance of missing or misplacing any parts. It also makes it possible to stop at anytime and pick it up again weeks later, without missing a trick! The bulkheads were disassembled using the same thinner, saw, and knife routine, then carefully sanding and rebuilding where needed.





Making construction drawings using this technique is very time consuming and often a frustrating business. In writing about this project, it seems things went along fairly quickly. Not so! Between earning a living, working on other projects, and repairing my oft-damaged flying machines, almost five years passed from start to finish.

This is the first time I have drawn plans for an airplane I didn't build. There is no need to prove the design or check that parts fit, because the parts all came from a ship we all know was a winner.

I have every intention of building Snow White, one day, but was very anxious to get this article into print, for reasons that should be very clear by now.

I won't include any building instructions, a few pointers, perhaps, but that's all. First of all, this ship should only be built by a modeler with some experience. It is not an easy project. There were many times, while drawing the plans, I thought of different, perhaps easier ways to do things, but decided to make no changes in the structure at all.

Joe used "plug-in" landing gear for two reasons. First, it made it simpler to plank and finish the fuselage. Second, he didn't want to take the chance of ding-up the wheel and strut

fairings. So he made two sets of landing gear, one without fairings for flying, and one for show.

I was tempted to bolt the wings on with nylon screws, but thought better of it. By the way, the wings of the original were held on with a long strand of 1/4 inch rubber (6 to 8 feet) attached to the front landing gear wire, over the wing and under the belly of the fuselage.

The engine mount is for the Forster 99. There is no suggested radio installation or anything else not in the original. The engine top hatch was held in place with an internal rubber band and hook.

In looking at some old photos of Snow White, just before this writing, I found I had omitted one detail. That was the cover for the access panel on the right side of the fuselage. This part was lost years ago, so was not with the ship when I took it over.

Very close inspection of some of the old photos will show that Snow White went through some very minor changes, before her completion.

The only change I would suggest is at the leading edge brace. The plan view of the wing shows the part just as on the original. However you will note



the leading edge brace drawn with the parts is longer . . . it will go from rib to rib. I feel the longer brace and some glass tape would make a much stronger wing, but the choice is yours.

Other than that small change, you have the "SNOW WHITE" as designed and built by Joe Raspante in 1937.

About the designer: Joe Raspante is a most unique person. His interest and talents range in every direction. Today most of his time is spent with his model airplanes and boats, and his TV ham station (that's right TV).

When I first met him, years ago, it was only a radio station. Every item in his station is hand made by him, with the exception of TV monitors, cameras (color and black & white) and a recorder.

He has a servo system he made to operate a robot that moves, focuses, and zooms his cameras while he broadcasts. It's far out!

Joe was one of the nation's pioneers in early R/C flight, with equipment of his own design. His first RC airplane now hangs in the Long Island Air Museum at Mitchell Field.

He has been honored by the AMA on a number of occasions, including the AMA Distinguished Service Award, for outstanding service to the hobby since 1924. Also, he was honored by the Long Island Drone Society with a life membership.



This man seems to be able to make anything he sets his mind to. He has scratch-built a four-stroke, four-cylinder, overhead valve, water cooled marine engine that powers a P.T. Boat that is nothing short of awesome!

His shop is the best equipped, best organized and cleanest shop you have ever seen. It is disgusting to see someone so neat! My shop looks as if it was bombed, and that's after I've cleaned it up. There is never a chip of wood or scrap of paper on the floor. Not even dust! One would think he never did a thing but clean up.

I have yet to meet anyone who is not fond of this gentle, kind man. The first thing that impresses you about him is that he is a "gentle" man, thoughtful, always helpful and completely unaware of his value to the rest of us. After all, don't you think it would take this type of man to dream up "SNOW WHITE? I do!

ADDITIONAL CONSTRUCTION NOTES BY WCN

In this day and age, only the most stubborn purist would build this magnificent model as a free flight, to be turned loose into our rapidly decreasing, unencumbered air space. For this reason, have indicated suggested RiC control surfaces in dotted lines.

Note that S/W's outline has not been disturbed. As the horizontal stab is located at about the mid-point of the vertical stab, I split the moveable rudder area into two parts, connected by a typical wire joiner normally used on two-piece elevators.

The elevators, in turn, are spaced far enough away from the center line to clear rudder action, thus avoiding a V-notch in either surface. Naturally, the elevator push rod will have to be split into two units.

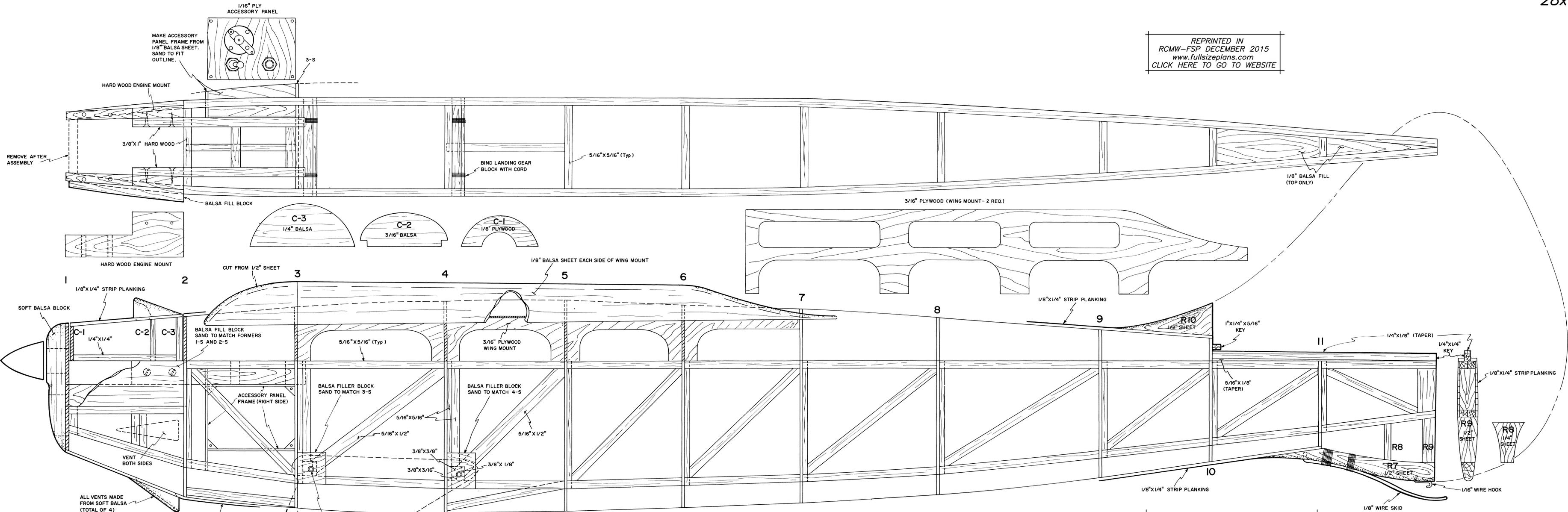


Note that the wing leading edge is made up of 1/8-inch sheet laminations. For sturdier but light construction, I'd suggest the trailing edge and tail surface outlines be laminated also.

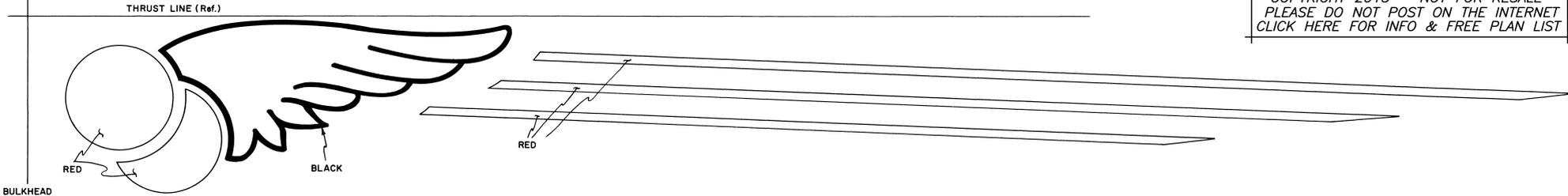
Ah yes ... the balance point. In the best tradition of old timer plans, it's not available, but try one-third, or five inches back from the wing leading edge at the fuselage.



REPRINTED IN
RCMW-FSP DECEMBER 2015
www.fullsizeplans.com
CLICK HERE TO GO TO WEBSITE



FUSELAGE SIDE MARKINGS

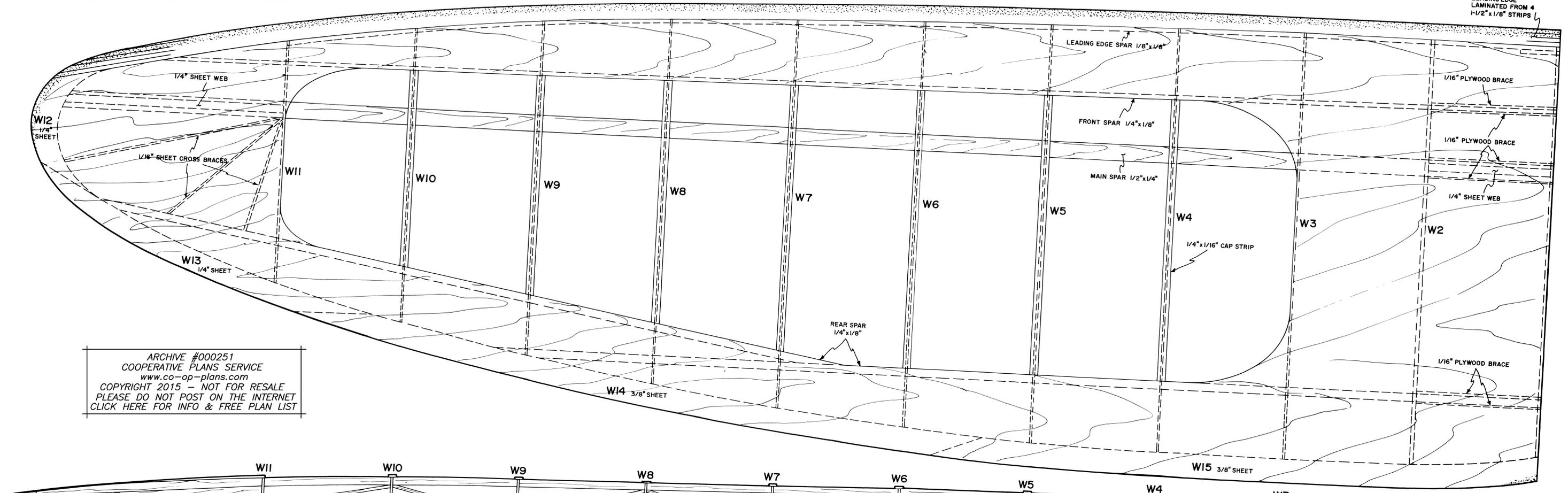


ARCHIVE #000251
COOPERATIVE PLANS SERVICE
www.co-op-plans.com
COPYRIGHT 2015 - NOT FOR RESALE
PLEASE DO NOT POST ON THE INTERNET
CLICK HERE FOR INFO & FREE PLAN LIST

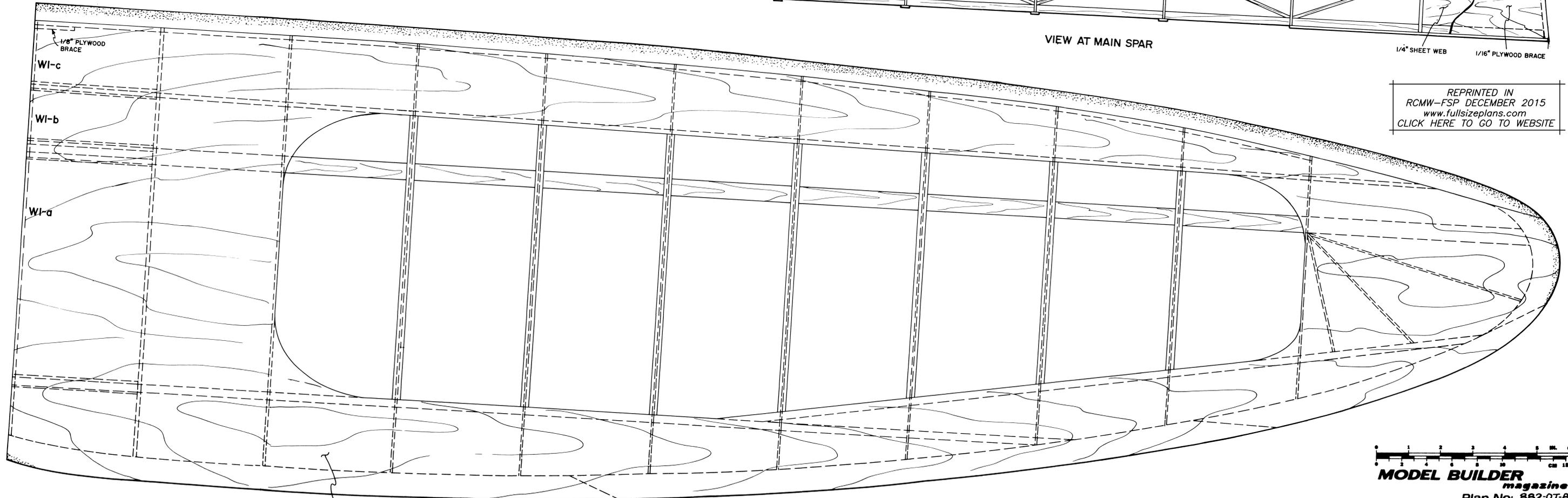
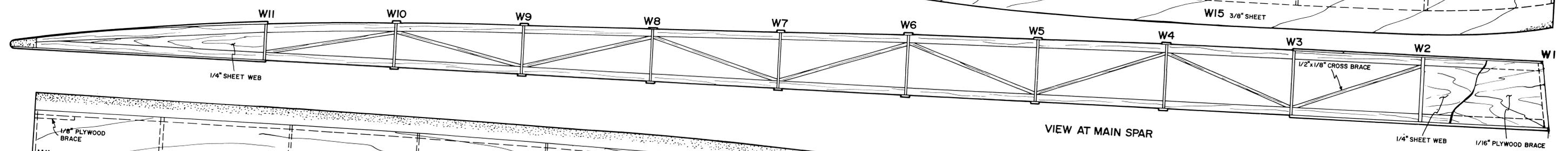
"SNOW WHITE"
DESIGNED BY: JOE RASPANTE
DRAWN & INKED BY: AL HOLMES

MODEL BUILDER magazine
Plan No: 882-QTA

ORIGINALLY PUBLISHED IN THE AUGUST 1982 ISSUE OF MODEL BUILDER



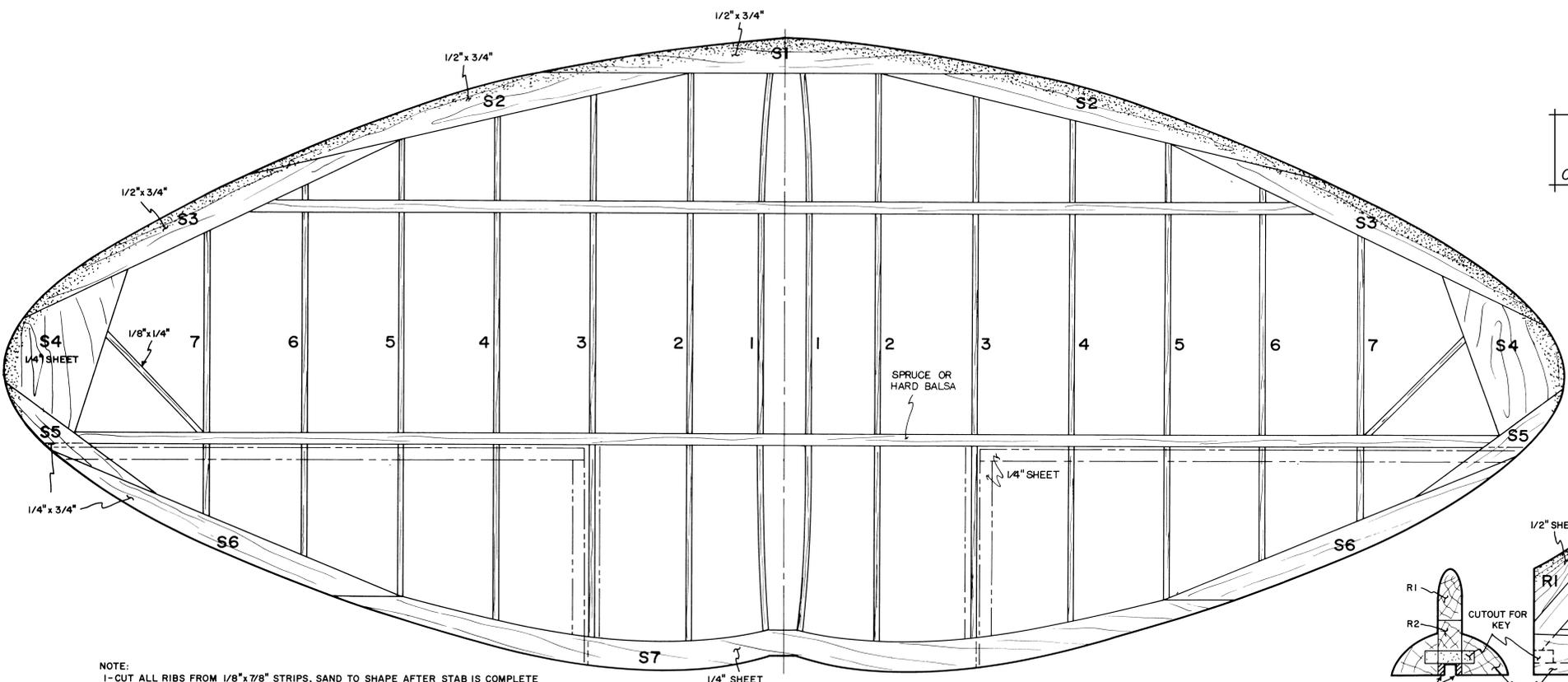
ARCHIVE #000251
 COOPERATIVE PLANS SERVICE
 www.co-op-plans.com
 COPYRIGHT 2015 - NOT FOR RESALE
 PLEASE DO NOT POST ON THE INTERNET
 CLICK HERE FOR INFO & FREE PLAN LIST



REPRINTED IN
 RCMW-FSP DECEMBER 2015
 www.fullsizeplans.com
 CLICK HERE TO GO TO WEBSITE

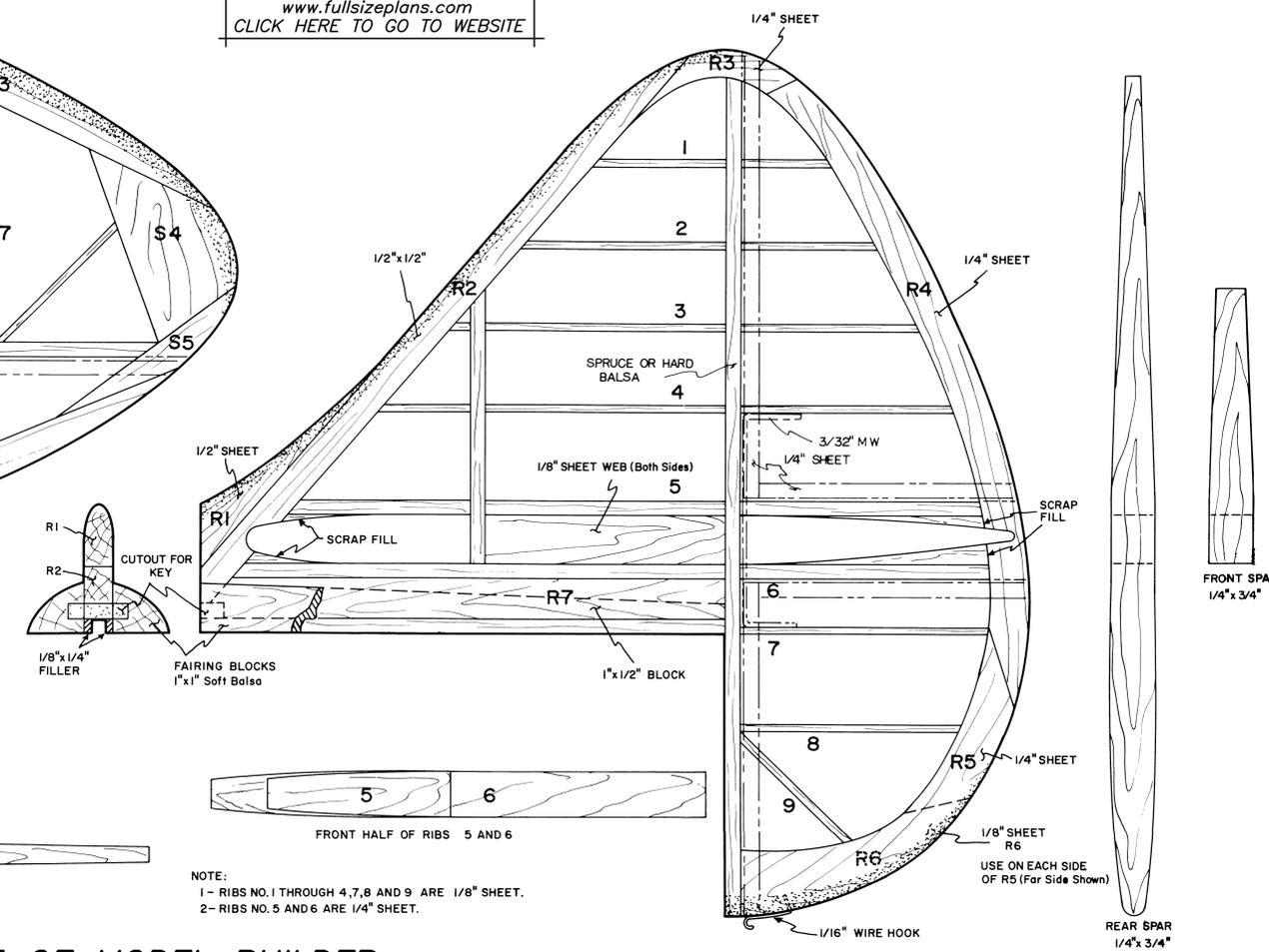


ALL WING SKINS ARE 1/16" SHEET

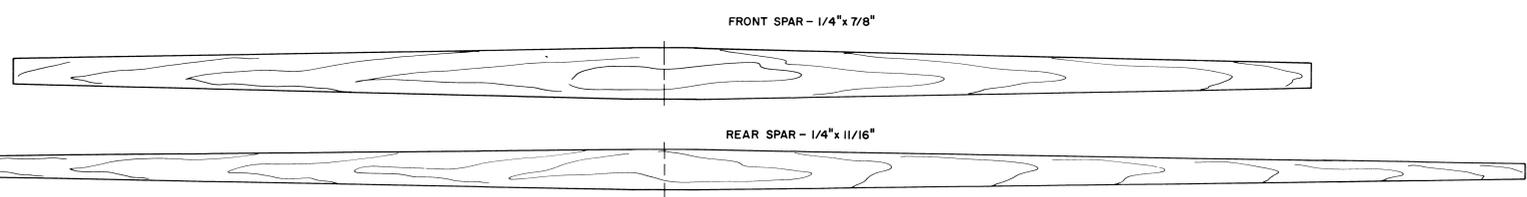


REPRINTED IN
RCMW-FSP DECEMBER 2015
www.fullsizeplans.com
CLICK HERE TO GO TO WEBSITE

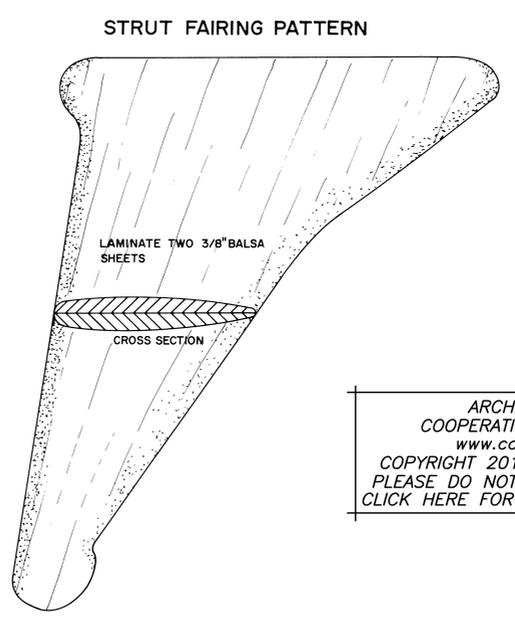
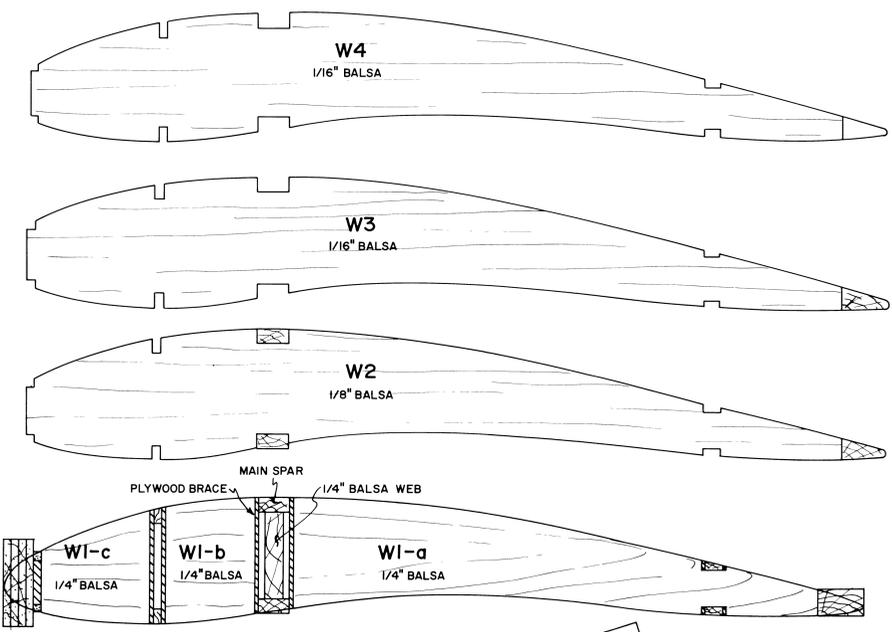
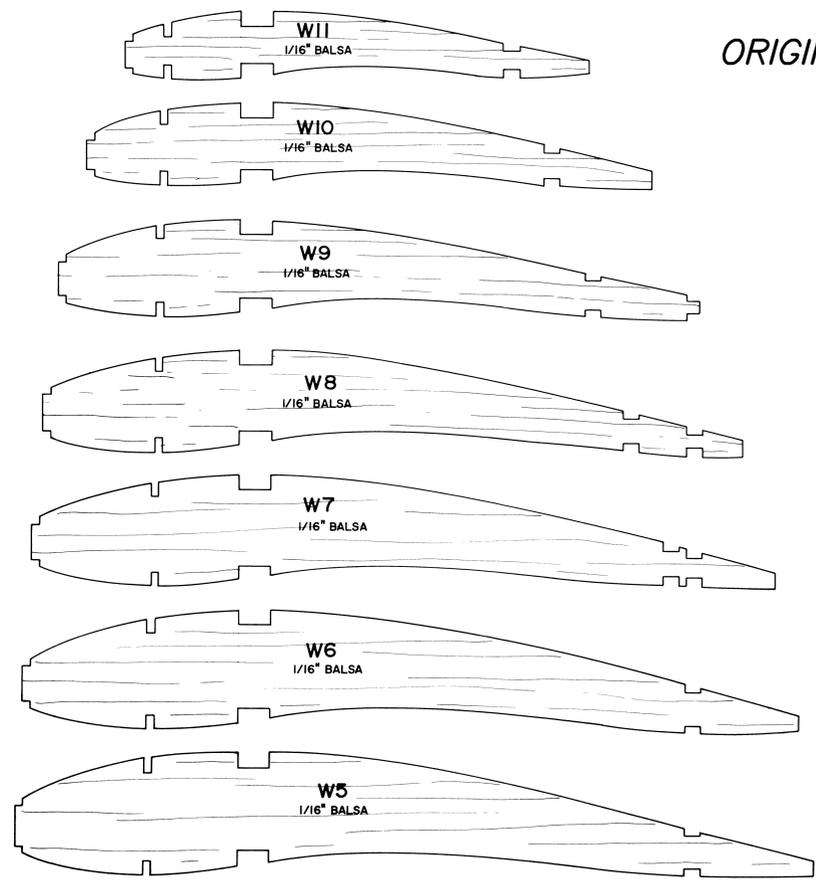
NOTE:
1-CUT ALL RIBS FROM 1/8"x7/8" STRIPS, SAND TO SHAPE AFTER STAB IS COMPLETE
2-DO NOT POSITION RIB NO.1 UNTIL VERTICAL FIN IS GLUED IN PLACE



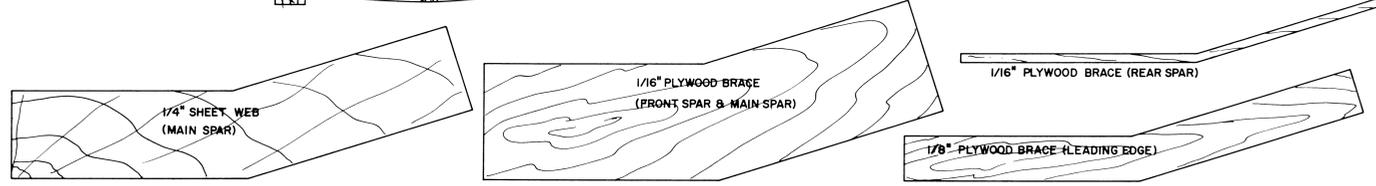
NOTE:
1- RIBS NO.1 THROUGH 4,7,8 AND 9 ARE 1/8" SHEET.
2- RIBS NO.5 AND 6 ARE 1/4" SHEET.

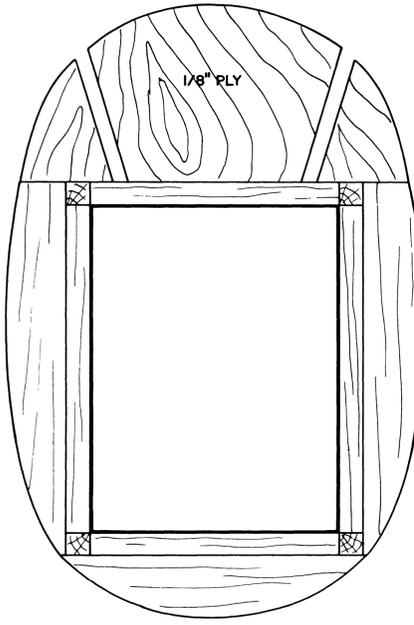


ORIGINALLY PUBLISHED IN THE AUGUST 1982 ISSUE OF MODEL BUILDER

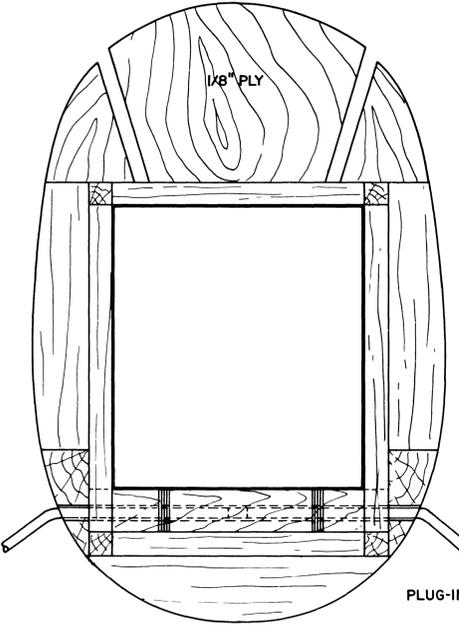


ARCHIVE #000251
COOPERATIVE PLANS SERVICE
www.co-op-plans.com
COPYRIGHT 2015 - NOT FOR RESALE
PLEASE DO NOT POST ON THE INTERNET
CLICK HERE FOR INFO & FREE PLAN LIST

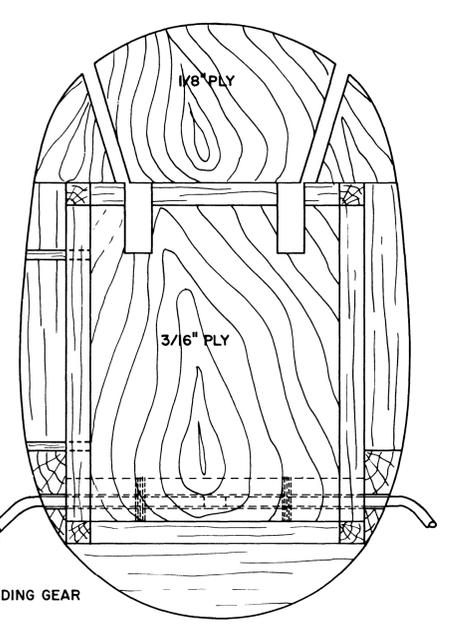




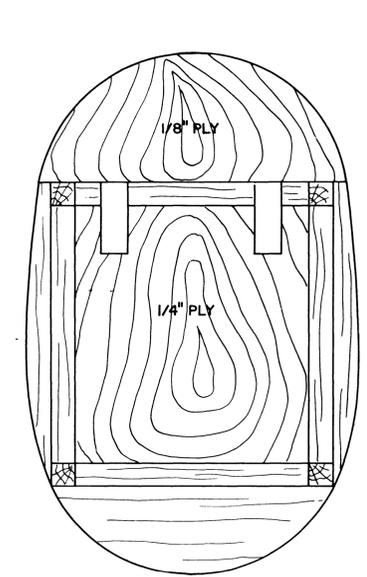
5



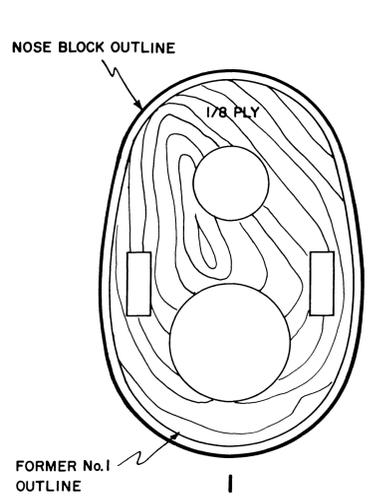
4



3

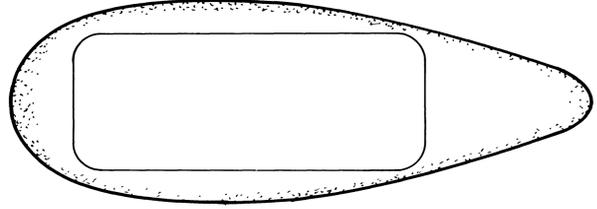


2



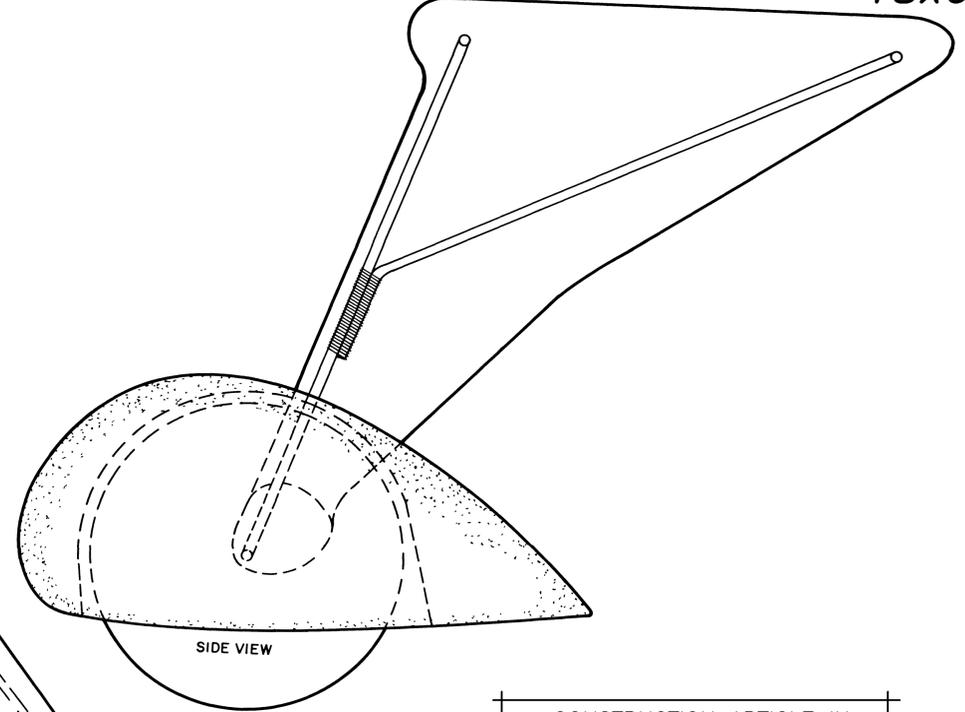
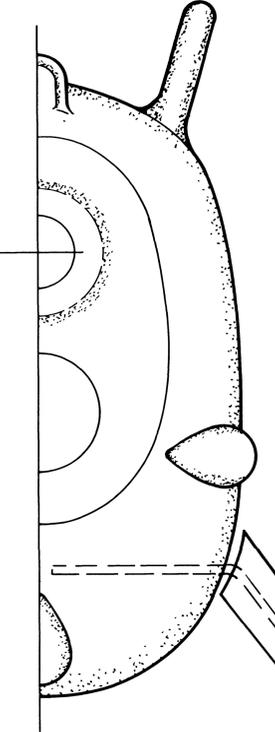
1

NOTE:
ALL FORMERS ARE MADE OF
1/8" Balsa, UNLESS NOTED.

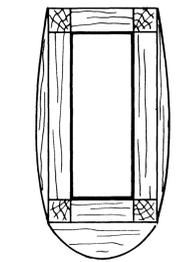


BOTTOM VIEW
WHEEL FAIRING PATTERN

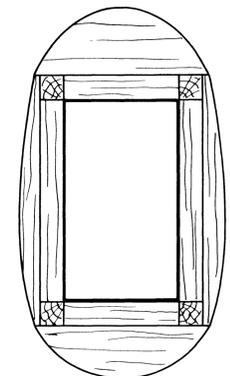
FRONT VIEW



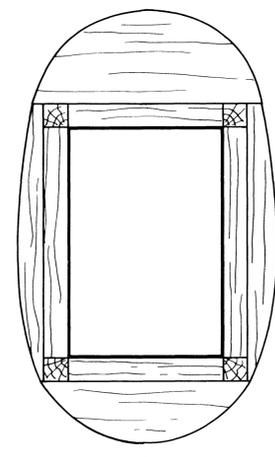
SIDE VIEW



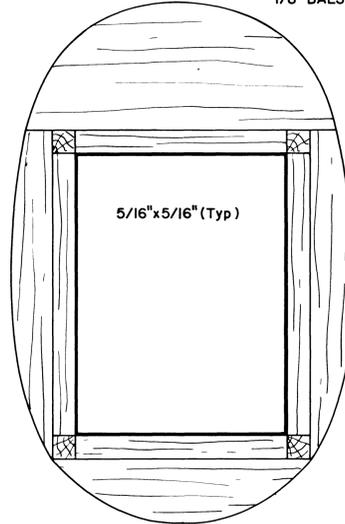
11



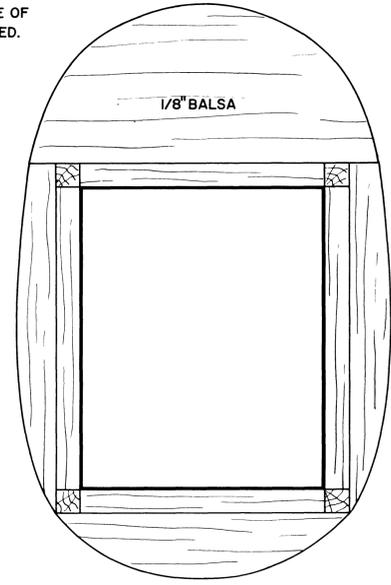
10



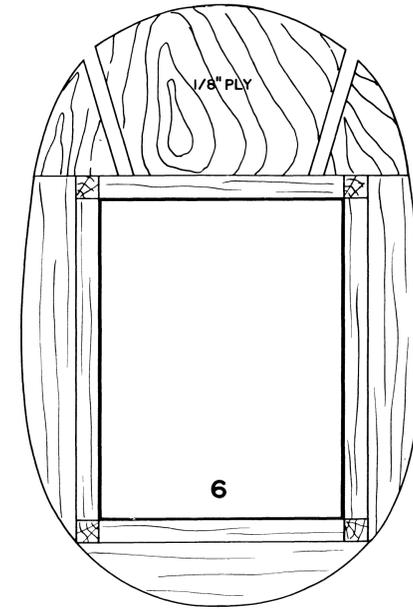
9



8



7



6

ARCHIVE #00251
COOPERATIVE PLANS SERVICE
www.co-op-plans.com
COPYRIGHT 2015 - NOT FOR RESALE
PLEASE DO NOT POST ON THE INTERNET
CLICK HERE FOR INFO & FREE PLAN LIST

CONSTRUCTION ARTICLE IN
RCMW-FSP DECEMBER 2015
www.fullsizeplans.com
CLICK HERE TO GO TO WEBSITE

ORIGINALLY PUBLISHED IN THE AUGUST 1982 ISSUE OF MODEL BUILDER

Back Issue MAGAZINE ARCHIVES

By Roland Friestad

As our regular subscribers know, particularly from the two pages that are usually at the end of each issue of RCMW, I am also deeply involved in collecting and archiving back issues of model magazines.

One of my collections is a complete set of **MODEL BUILDER** magazine from Volume 1, Number 1 which was published in 1971, through the final issue in 1996. That accounts for 295 issues if my count is correct.

All of those issues are available on a USB Flash Drive for \$75US, postage paid worldwide. If you are interested in acquiring the collection see the back pages of this issue for details.

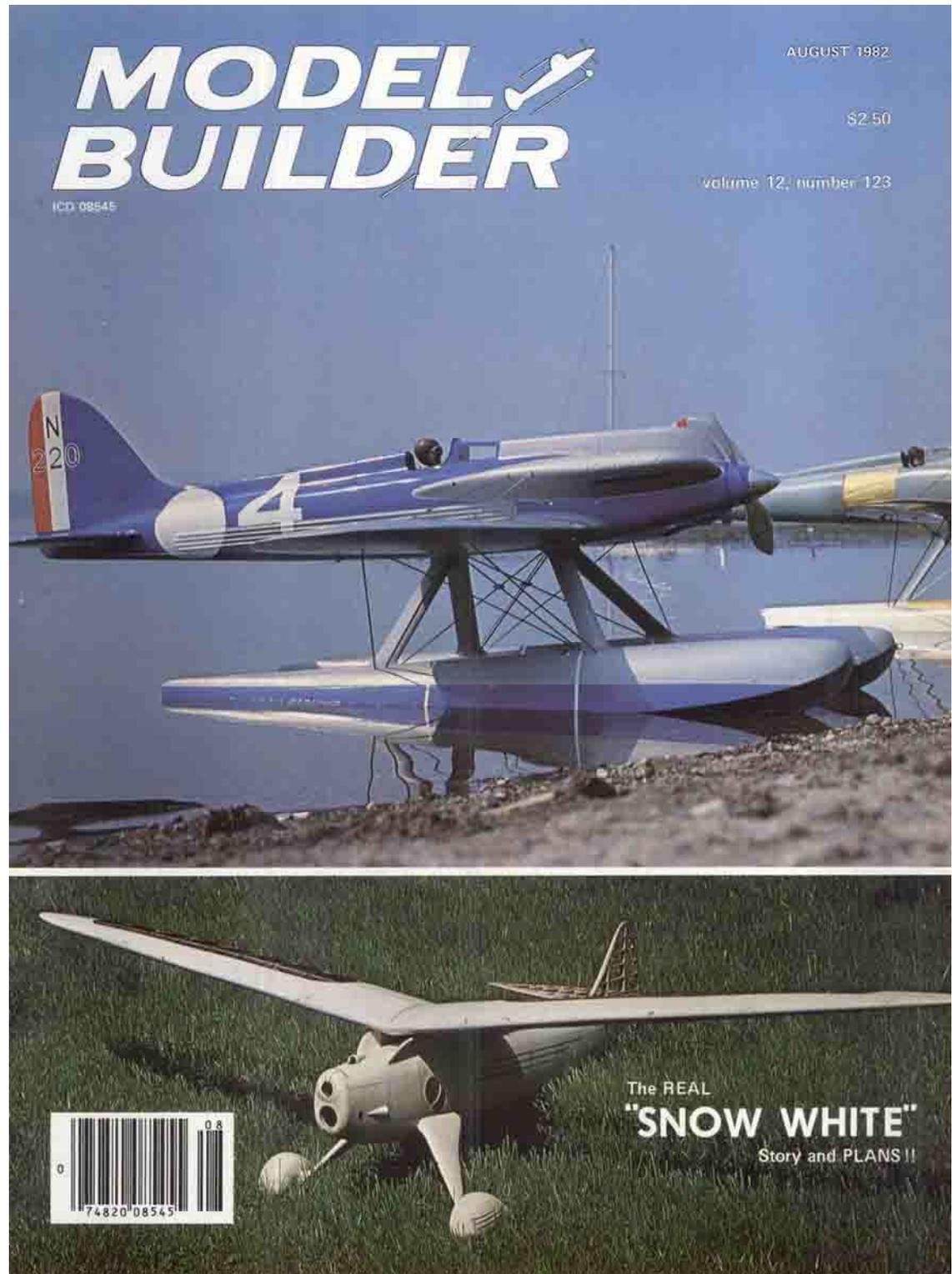
However, the main reason for this page is to announce that I will be allowing subscribers to download selected issues of **MODEL BUILDER** magazine as well as other model airplane magazines from my digital collection.

I'll start with the August 1982 issue which was the one that had the **SNOW WHITE** plans and construction article featured in this issue of RCMW. Just go to the following link and click on the download button in the upper right corner of your browser screen. The issue will be downloaded as a PDF file and you can read or print out any or all of the pages as you choose.

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

This download link will expire on March 1, 2015, so if you'd like this issue for your own collection, better do it now.

Send me an e-mail if you like this new feature



TEXACO No. 13

From the July 1950 issue of Air Trails comes this .29 powered scale U-Control version of the TRAVELAIR MYSTERY SHIP. The model was designed by Walt Muscanio, well known for a multitude of different designs, but mostly for his well researched UC scale projects.

THE almost legendary figure of Commander Frank M. Hawks remains in the memory of all persons interested in aviation. His famous Travelaire "Mystery Ship" established many intercity records, and its design set the pattern for many future racing planes.

It was in this Wright R-975 powered craft that Commander Hawks first attained world fame as a record smasher. The Texas Company sponsored the craft, so "Texaco No. 13" was an appropriate name. Frank Hawks selected the "No. 13" and obtained the double "13" license number to "thumb his nose at superstition.

These are some of the flights made by Hawks in his famous speed plane: On August 6, 1930, a westbound U.S. transcontinental record of 14 hrs., 50 mins. and 43 sec. was established in a flight from New York to Los Angeles. By returning in 12 hrs., 25 mins. and 3 sec. on August 13, he set a new eastbound coast to coast record.

Flying from London to Rome in 5 hrs. and 20 mins., and then from Rome to Paris in 4 hrs. and 32 mins., both on April 22, 1931, two European records were smashed.

Another record was made when Hawks sped from London to Dublin in 1 hr. and 40 mins. on April 30, eight days later!

And once again the Texaco 13 burned the skies in a flight from London to Berlin on May 12, 1931. With Hawks at the controls, this record flight took 2 hrs. and 57 mins.

We wish to express our appreciation to D. W. Stewart and the Texas Company for their cooperation in furnishing valuable data on the Travelaire Mystery Ship.

It is advisable to begin construction with the fuselage and empennage. Cut the keel from 3/32" hard sheet balsa and cut away for the engine mounts, control horn and bellcrank mount. Cement the engine and bellcrank mounts securely in place and add the sheet with IV sheet cemented to it at station B.

Cut out the remaining formers and cement in place on the keel. The elevator and stabilizer are cut from soft 3/16" sheet and sanded to the cross section shown.

Add the spar, hinges and control horn (which is bolted and cemented in place) and cement the stabilizer to the top of the keel. Install the bellcrank, 1/16" control rod and .025" lead-out lines, and now the fuselage is ready for planking.

Cement a vertical strip of 1/4"x Wx/ IV to the rear of the keel in order to keep the planking strips 1/4" apart, and fair into the rudder. A relatively slow-drying cement should be used.

Do not select rock-hard balsa for planking strips; use medium-soft balsa. You will find the fuselage of the "13" one of the easiest you ever planked, because there are virtually no curves from front to rear.

When planking do not complete one whole side at a time. It is better to add one or two strips on each side as you work; in this way the fuselage will not have a tendency to bend out of shape.

Let the planking dry for several hours and then sand smooth, using a sandpaper block. Clear-dope twice and sand again. The cowl can be turned on a lathe or carved with a sharp knife from medium balsa. This is installed later.



Cut the medium-balsa wing leading edge roughly to shape and cement the plywood joiner to it, obtaining the correct dihedral angle. This joint must be well cemented. Heavier plywood can be used but no lighter stock!

Ribs No. 2 and the landing gear mount are now cut from plywood and securely cemented in place. The underside of the leading edge must be cut away where its path crosses the landing gear mount.

While this is drying the wing covering can be cut out. Cement ribs No. 3 and 4 to the bottom covering and attach the covering to the leading edge assembly, completing one side at a time. Cement all joints well and set aside to dry.

We tried bending the landing gear from the more conventional music wire, but found it to be an almost impossible task without deviating from scale appearance.

Therefore we used the sheet brass type which has worked well for us, and although it is quite rigid the airwheels or semi-pneumatic wheels will absorb the shock of normal landings on smooth surfaces.

Brass was selected because, while it is relatively easy to work with, it is quite tough and stands abuse. You can have this cut out at a metalworking shop, or your school shop teacher might assist you.

If you do it yourself you'll need a drill, saw and light file. A vise is handy to hold the job but is not an absolute necessity. It is best to make both pieces at one time.

Cut the sheet brass roughly to shape and bolt the two pieces together. These can be bolted through the five holes which will later hold the landing gear forks in place and also the landing gear itself.

Using the pattern on the plans, scratch the outline on the brass and drill small holes in the corners where the saw blade must change its direction. Now saw the struts to shape, being very careful not to make the struts too thin.

When this operation is completed, file all edges smooth. Separate the two pieces and file and emery paper the struts to a fairly streamline shape, but do not remove an excessive amount of brass.

Bend the flange on the landing gear to the correct angle to fit the wing dihedral and bolt it securely to the plywood support. Apply cement to the nuts to prevent the L.G. from loosening. Drive a wood screw into the front hole. Be sure to cut away the bottom wing covering for the brass strut flange.

The four brass wheel forks are now cut to shape in a similar manner, and after being bent to shape they are securely bolted to the struts. File off the ends of the bolts protruding from the nuts and solder the bolt end to the nuts.



Install the wheels at this time, using a bolt as the axle which must also be soldered to prevent loosening. Cut the soft balsa wheel covers and hollow for the wheel and fork. Cement these securely to the brass strut.

The lightening holes help hold the covers in place because the cement can reach both wood surfaces of the wheel covers. When dry, the covers are sanded to shape and several coats of dope applied.

The bottom covering trailing edge must be beveled to continue the upper camber line of the ribs; then the top covering can be added, with plenty of cement used. Add the solid wing tips and set aside to dry. Sand to shape and dope twice.

Cut the fin and rudder from 1/4" medium sheet and be sure to add the sheet to each side of the rudder in order to fair the fuselage into the rudder. See section F. Sand smooth and dope once. Cement this assembly in place on the fuselage and fillet with cement.

The wing can now be attached to the fuselage. Cut away the fuselage planking a little at a time until a good fit is obtained.

A portion of the 1/2" and 1/8" sheet at section B must also be cut away to admit the wing leading edge. Apply liberal quantities of cement in this operation. Add the wing fillet and apply several coats of cement to the wing-fuselage joint.

Cement the hardwood cowl spacers to the engine mount and screw the cowl in place. Add the headrest and fillet well.

The entire model should now be well sanded with very fine sandpaper. Sand the cockpit edge carefully in order to produce the required shape. The cowl can also be cut to make room for the engine cylinder.

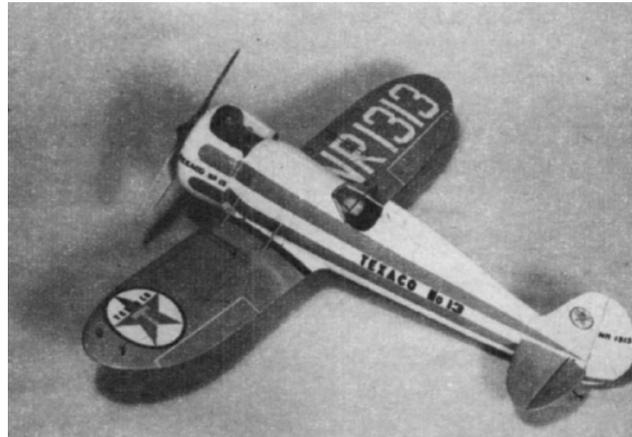
Wood filler must be applied in order to get a good finish. Three coats with sanding after each were required. The model is painted red and white and the markings are shown in the photographs and plans.

The star is red on a white circle; the "T" is green and "Texaco" within the star is black. Paint all the white areas first and then mask them off and apply the red paint. We used "Trim Film" for the red fuselage stripes and license numerals (black on fuselage, white on wing) as well as the Texaco insignia.

Ordinary colored dope was used as paint and after it was rubbed down we applied a coat of clear fuel proofer. This must also be applied to the engine mounts and cowl interior and over the "Trim Film."

With the addition of rigidly fastened control line guide, wing walk, pine struts, rigging, tail skid and celluloid windshield, the model is ready for flying.

The model must balance along the line indicated. The addition of lead weight in the nose or tail will remedy any unbalanced condition.



We used .012" lines 50 feet long and flew from a concrete surface. Engines from .19 to .29 displacement are recommended.

If you are a novice it is suggested that the landing gear be moved 1/2" forward of the location shown on the plans. This will make landing easier. Our Texaco 13 was by no means sluggish, and care should be taken not to over-control the

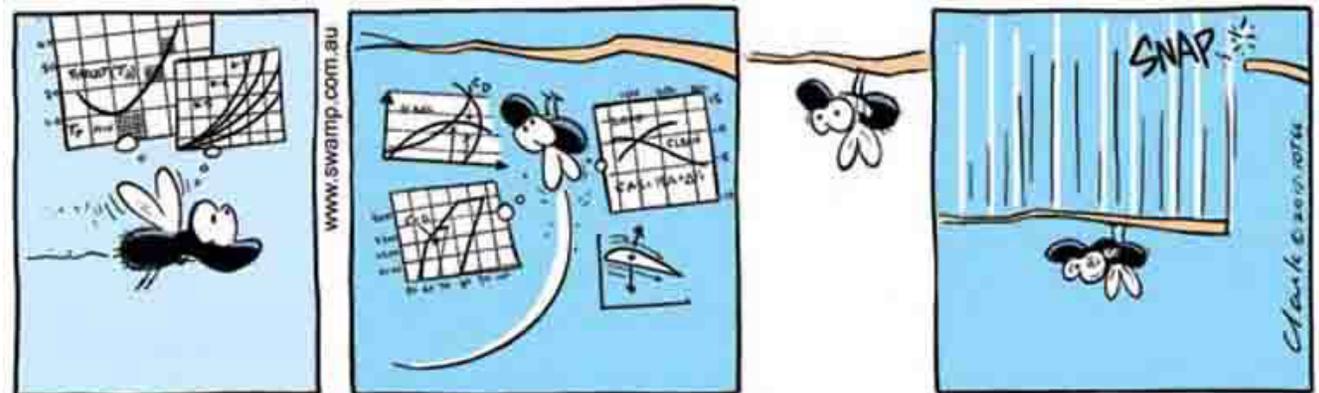
Bill of Materials

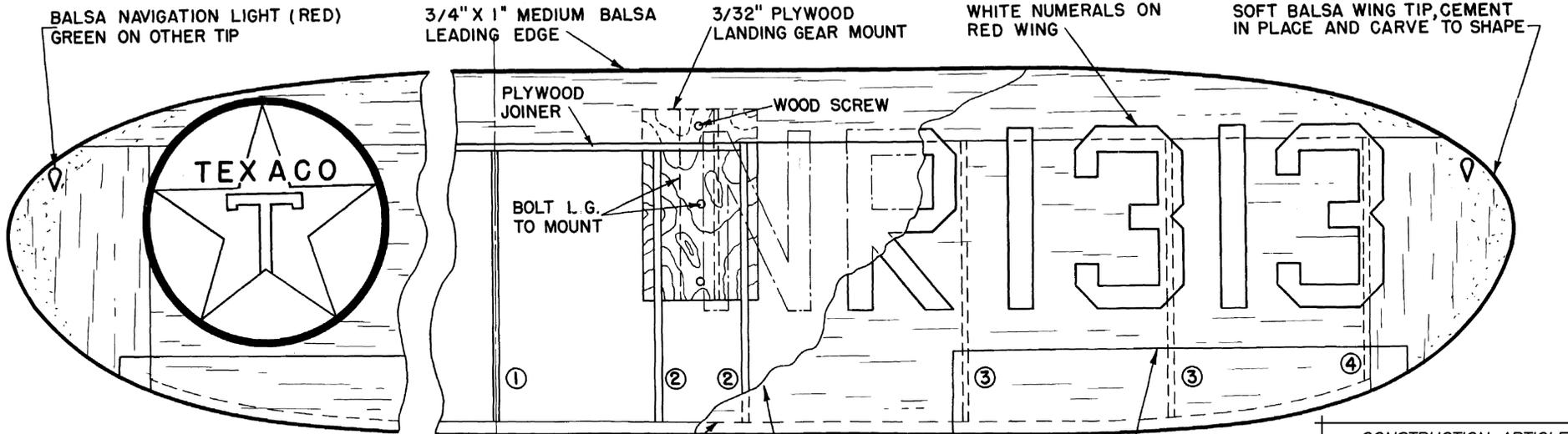
Fuselage: 1 pc 3/32" x 2" x 18" hard balsa, keel. 1 pc 1/8" x 2" x 24" medium balsa, formers. 26 pcs 3/32" x 3/8" x 18" medium soft, planking. 2 pcs 2" x 4" x 23/4" medium hard balsa, cowl. 1 pc 1/16" sheet dural, 3/4" x 2", bellcrank. 1 pc 1/16" dia. music wire, 14" long, control rod. 1 pc 1/2" x 4" x 4" medium balsa, former B. 1 pc 5/8" x 5/8" x 7" soft balsa, headrest. 2 pcs 1/4" x 1/2" x 5" hardwood, engine mounts.

Wing: 1 pc 3/4" x 1" x 24" medium balsa, leading edge. 1 pc 3/32" x 2" x 12" medium balsa, ribs. 1 pc 3/32" x 2" x 6" plywood, ribs. 1 pc 3/32" x 23/4" x 15/8" plywood, L.G. mount. 2 pcs 4 1/2" x 4" x 1/16" brass, L.G. strut. 4 pcs 3/32" x 2" x 24" medium soft balsa, wing covering. 2 pcs 5/8" x 2" x 3 1/2" soft balsa, wing tips. 1 pc 3/32" x 7" x 1" plywood, wing joiner. 4 pcs 1/2" x 2" x 4 1/2" soft balsa, wheel covers.

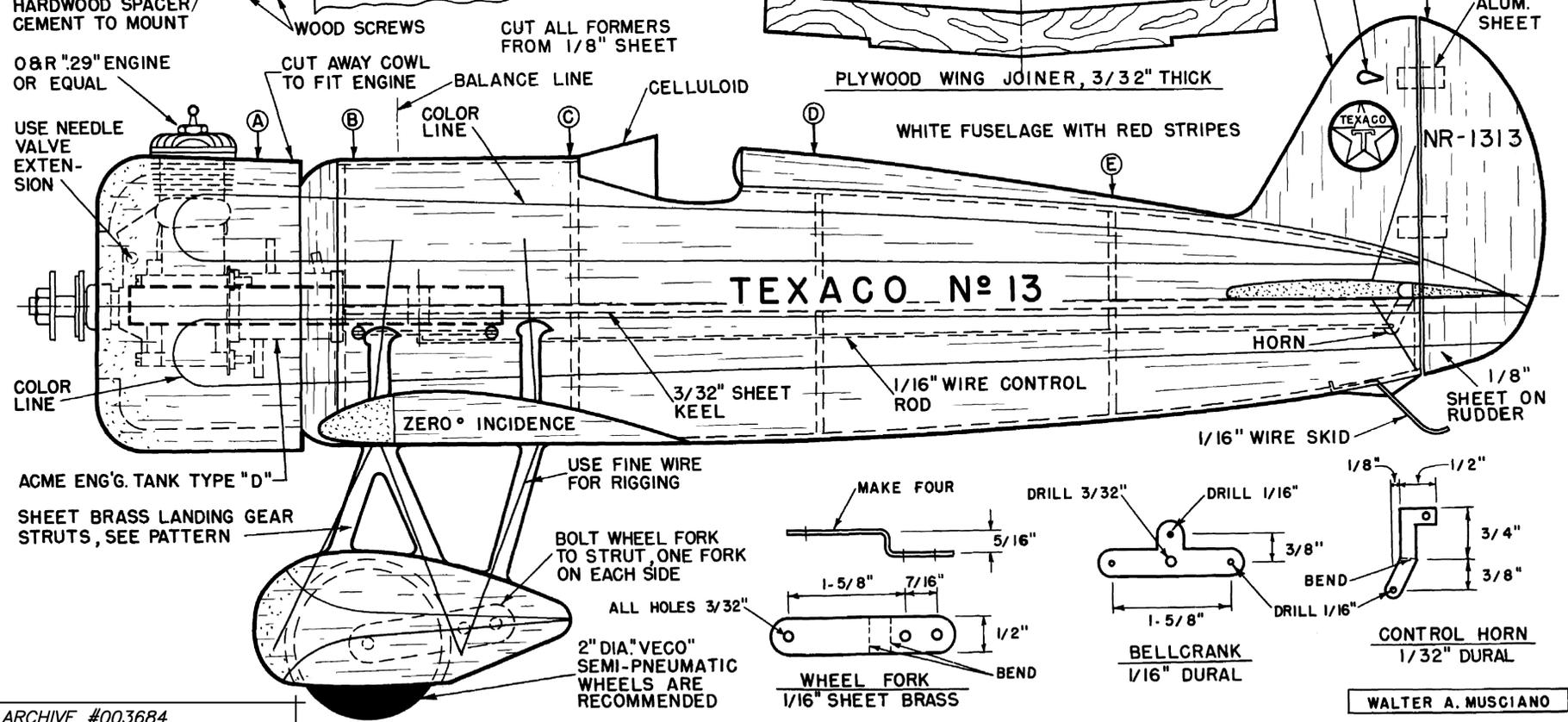
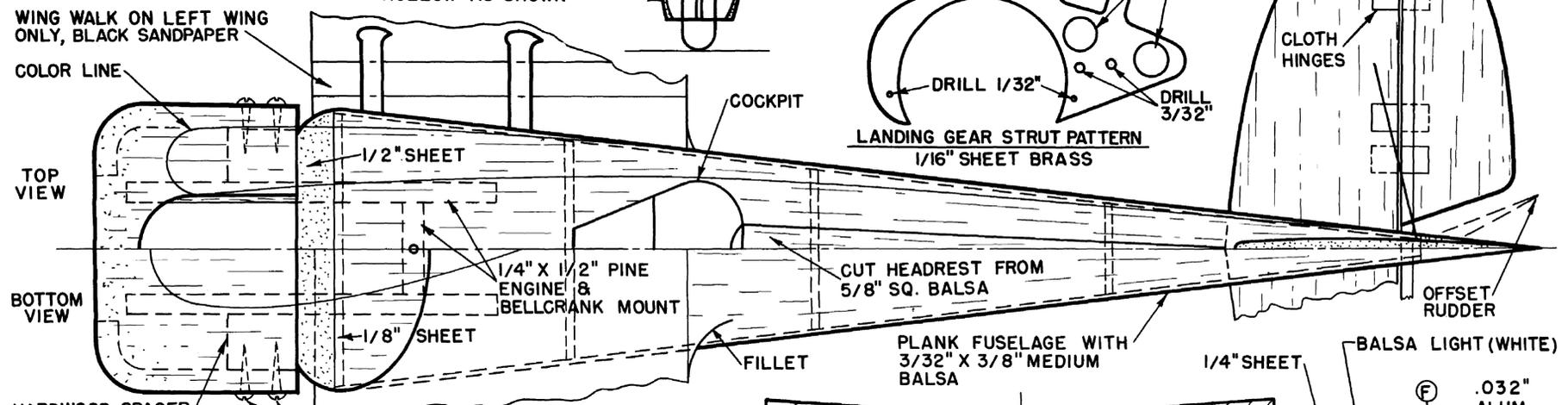
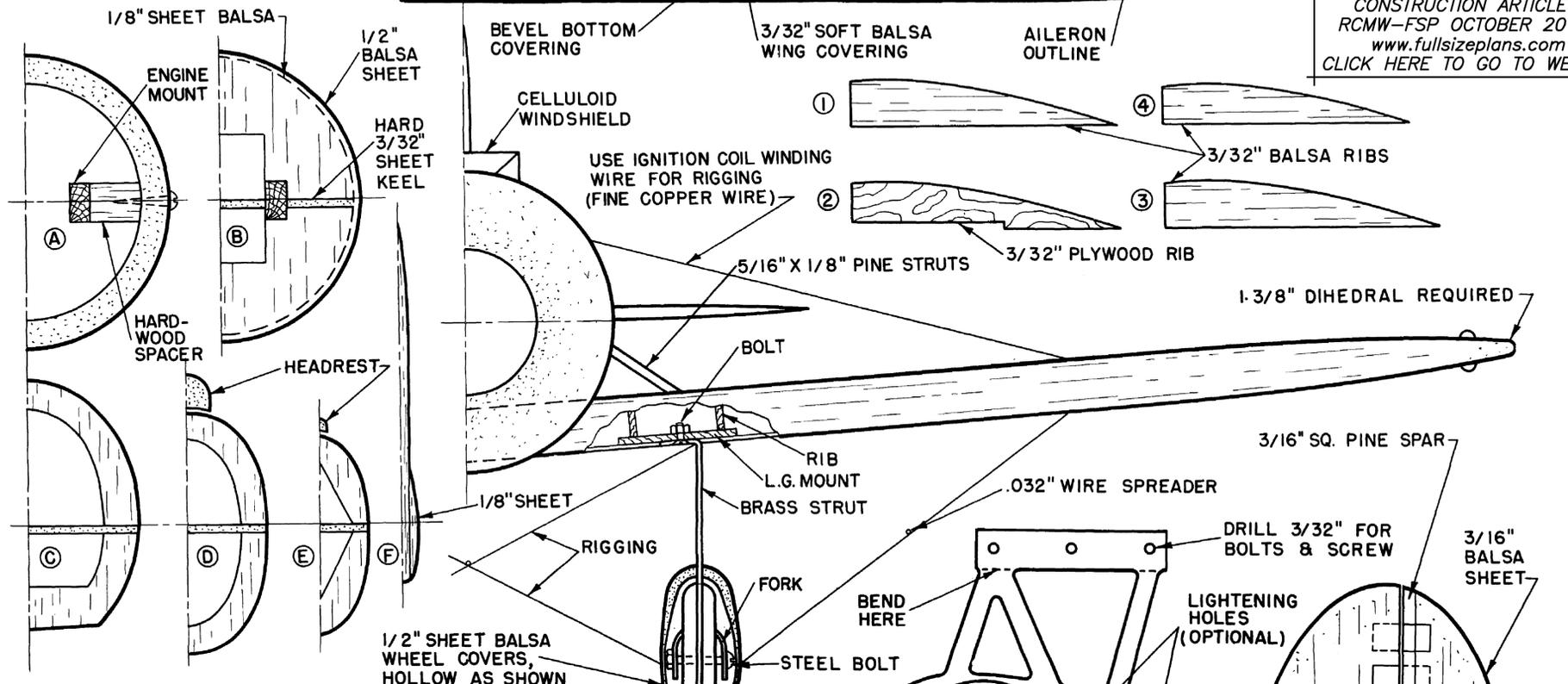
Empennage: 1 pc 1/4" x 9" x 2" soft balsa, fin and rudder. 1 pc 3/16" x 3" x 18" soft balsa, stabilizer and elevator. 1 pc 3/16" x 3/16" x 10" pine, elevator spar. 1 pc 1/32" dural sheet, 1 1/4" x 3/4", control horn.

Miscellaneous: nuts, bolts, screws, wheels, lead-out lines, 6 oz. white dope, 4 oz. red dope, Trim Film, fine soft wire, celluloid, fuel proofer, rubbing compound, sandpaper, cement, clear dope, wood filler.





CONSTRUCTION ARTICLE IN
RCMW-FSP OCTOBER 2015
www.fullsizeplans.com
CLICK HERE TO GO TO WEBSITE



ARCHIVE #003684
COOPERATIVE PLANS SERVICE
www.co-op-plans.com
COPYRIGHT 2015 - NOT FOR RESALE
PLEASE DO NOT POST ON THE INTERNET
CLICK HERE FOR INFO & FREE PLAN LIST

DESIGN BY WALT MUSCIANO
ORIGINALLY PUBLISHED IN JULY 1950 AIR TRAILS

WALTER A. MUSCIANO

PLAN VALUE
3/6

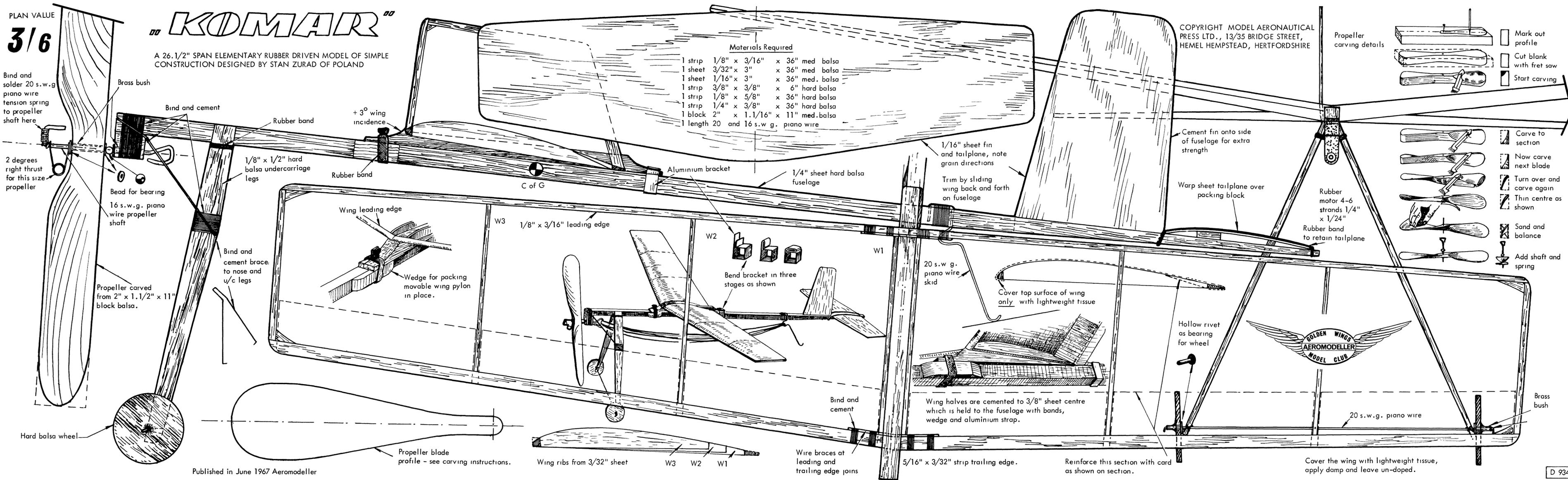
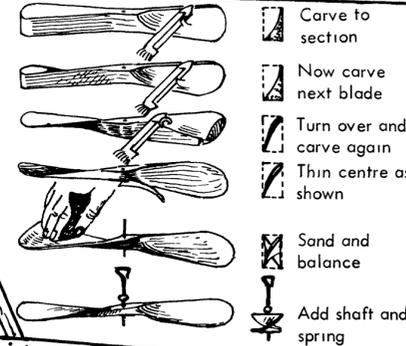
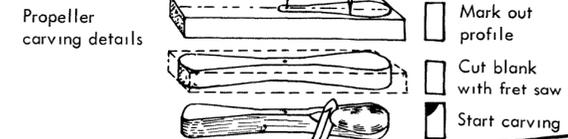
KOMAR

A 26.1/2" SPAN ELEMENTARY RUBBER DRIVEN MODEL OF SIMPLE CONSTRUCTION DESIGNED BY STAN ZURAD OF POLAND

Materials Required

- 1 strip 1/8" x 3/16" x 36" med balsa
- 1 sheet 3/32" x 3" x 36" med balsa
- 1 sheet 1/16" x 3" x 36" med. balsa
- 1 strip 3/8" x 3/8" x 6" hard balsa
- 1 strip 1/8" x 5/8" x 36" hard balsa
- 1 strip 1/4" x 3/8" x 36" hard balsa
- 1 block 2" x 1.1/16" x 11" med. balsa
- 1 length 20 and 16 s.w.g. piano wire

COPYRIGHT MODEL AERONAUTICAL PRESS LTD., 13/35 BRIDGE STREET, HEMEL HEMPSTEAD, HERTFORDSHIRE



Published in June 1967 Aeromodeller

D 934

***Does anyone you know tell you ---
“I would like to buy you a Christmas gift
but I don’t know what you would like”***

***That’s pretty common for model
airplane builders***

***Here’s one answer to that problem.
Print out the last two pages of this issue
and hand it to that someone.***

(Maybe even circle a couple of items)

***Our Christmas gift to you is a
20% discount if you mention
the RCMW December 2015 issue
With the order***

Back Issues 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.

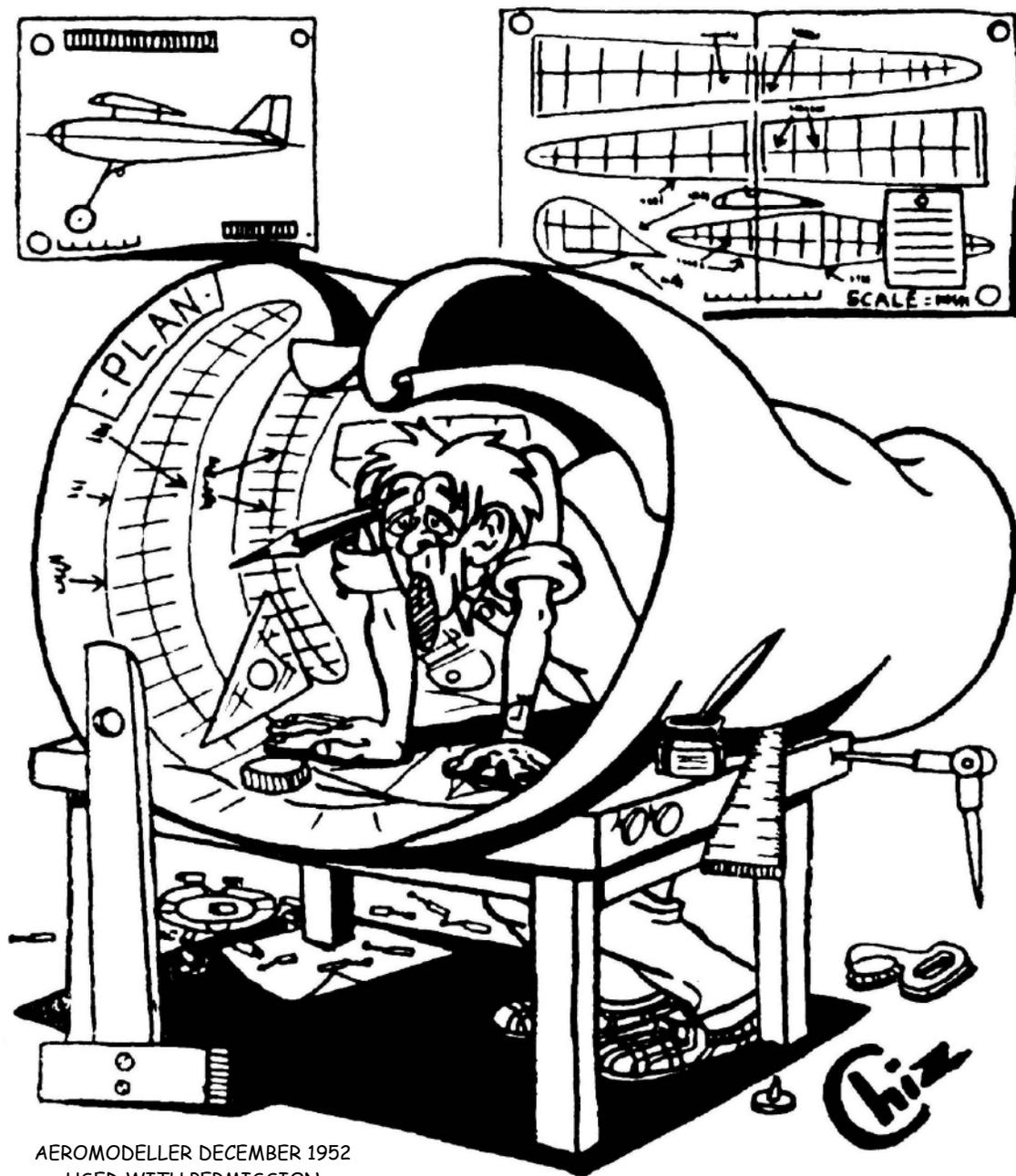
That's NOT the way it was in the past, when you had to build a model before you could fly it. If you're an old-timer, as I am, you have fond memories of Air Trails, Flying Models, Model Airplane News, Aeromodeller and many of the several other magazines available "way back when".

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

We have switched to USB Flash Drive Cards Much More Reliable

NEW - Now available is a digital collection of the first 10 years of RC Modeler magazine, starting with the first issue published in October of 1963 through the issue of December 1972 - 109 issues in all on a single USB drive card. - **\$50 - Postage paid world wide**

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 still in publication. We have the following collections 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**

AEROMODELLER is currently being digitized and the first collection will include the 1950's and 1960's (240 issues) which will be available in January 2016 -

The digitizing of several other magazines will follow including MODEL CRAFTSMAN, FLYING ACES, POPULAR AVIATION, MODEL AIRCRAFT (British) and others. This is a long term project. Many thousands of hours and dollars are represented in these collections.

All prices include postage paid worldwide

**Send payment using Paypal to
cardinal.eng@grics.net**

**Or check or money order to
Roland Friestad
1640 N Kellogg Street
Galesburg, Illinois 61401
USA**

**Makes a Great Gift for Modelers
Circle your interests and give this
sheet to someone who has a hard time
finding you a gift**