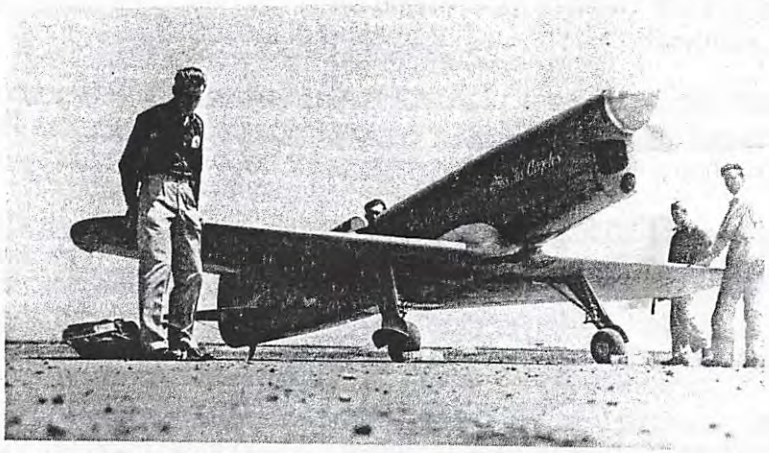
CROSSWINDS

#115

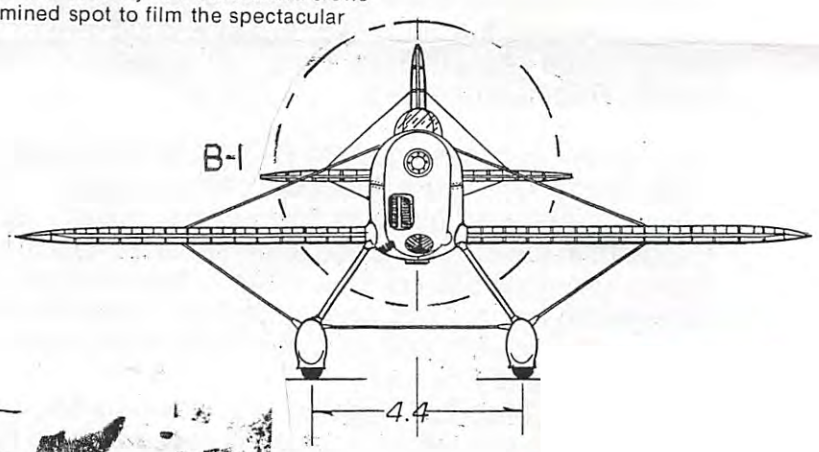
Lawrence Brown's Racing Planes

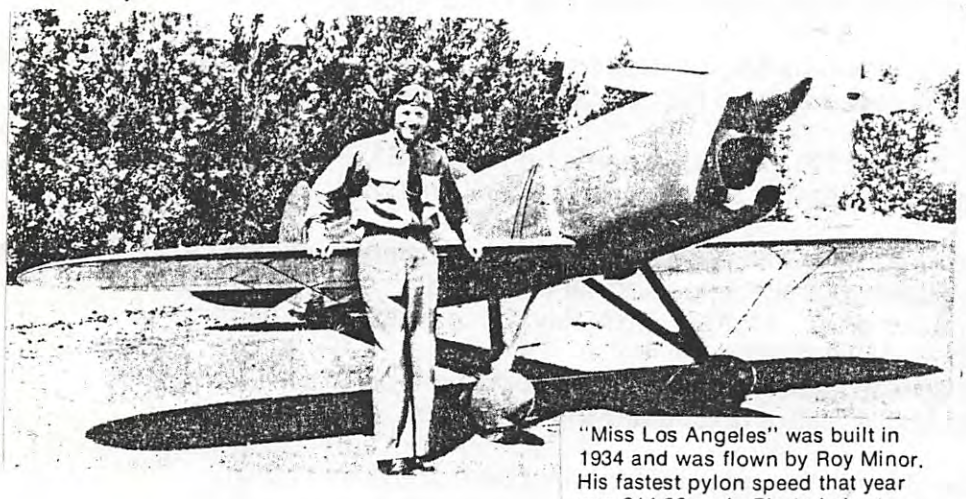
16" B-1, 16" B-2 and 16" B-2, 1938 Version



Sporting a cantilever wing and inward retracting landing gear did not help the Brown B-2 speed in 1938. Most of the money earned may have been made from news shots taken of the wheels up landing at Cleveland. It appeared to many as if the camera crews were set-up at a pre-determined spot to film the spectacular landing.

CROSSWINDS
RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OH 44124





"Miss Los Angeles" was built in 1934 and was flown by Roy Minor. His fastest pylon speed that year was 214.92 mph. Photo below shows the "old reliable" Brown B-2 at Cleveland in 1937 with Marion McKeen doing the piloting. His speed in one race was 223.64 mph.

The Brown Race Planes

This project started out as a tribute to Russ Brown to celebrate his 75th Birthday although he claims to be no relation to Larry Brown the designer of the Miles & Atwood Special and the famous Brown B-1, B-2 and B-3 racers . Russ is the' glue' of the Cleveland Free Flight Society, one of its founding members, its principal Contest Director, editor of "Crosswinds" and club historian. He has never missed a meet or a meeting and keeps the club running smoothly with his record keeping and sound advice. His invaluable assistance in providing drawings of actual aircraft, plans of models and historical detail has made it possible to feature several somewhat obscure and interesting plans for "Crosswinds".

This issue of "Crosswinds" features plans for the all yellow Brown B-1 and the two versions of the B-2. It does not include the Miles& Atwood Special because, as Russ pointed out to me, it was green and a model of it could too easily be lost in the grass at the flying field!

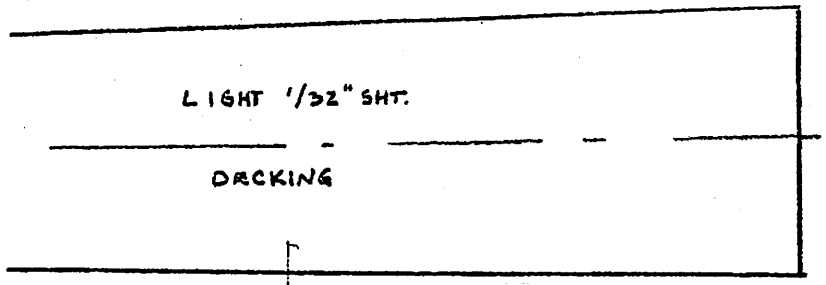
The B-1 and original B-2 had fixed landing gear resulting in attractive models, but adding complexity to their construction. I built the B-2 with fixed gear first and found it to be a good, but not exceptional flyer. The retractable L.G. version had a new, non externally braced wing and was quite a clean ship with a long nose moment and good wing area, making it an attractive and light weight model subject.

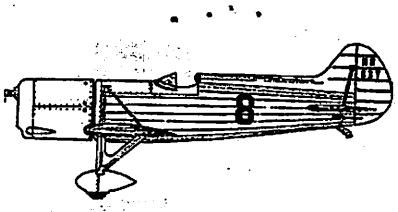
The full sized B-1, powered with a 4 cylinder supercharged 363 cu. in. 185 hp.Menasco Pirate engine, was first flown in 1934 and placed second in two 550 cu. in. events in the New Orleans Pan-American race and two thirds in the same class. It came in second, behind the Miles& Atwood Special in the 375 cu. inch races. Later that year its entire engine mounts and cowling broke loose and fell to the ground. Miraculously Ralph Bushy was able to land the plane in a haystack and survive his serious injuries. The B-1 was bought some years later by Tony LeVier and converted to a Goodyear type racer, flown by Billy Robinson in 1948.

Larry Brown also designed the B-2 in 1934, but around the 6 cylinder 300 hp. supercharged Menasco Super Buccaneer engine. This all red plane was known as the "Miss Los Angeles" and was flown by Roy Minor. Its flashy gold leaf lettering made it stand out in the crowd! It had a top speed of 270 mph. and landed at 60 mph. This B-2 placed first in the 550 cu. in. and 5th in the unlimited Shell Speed dashes, but was damaged in a nose-over landing keeping it out of the first two 550 cu. in. races. It placed first over the M&A in and 4th in the 1000 cu. in. event and second in the Thompson at a fastest speed of 214 mph.
In 1935 the "Miss Los Angeles" was flown by Marion McKeen but was kept out of all but two races due to a cranky engine. It placed second in one 550 cu. in. race at 206 mph. and 6th in the Thompson at 188 mph.
In 1936 McKeen placed 3rd, 5th, 6th and 7th in the B-2, going home with $1, 675 winnings.
In 1937 the same old plane placed 2nd, 5th and 9th earning him $950 with a fastest speed of 223 mph.
In 1938 the B-2 had a new cantilevered wing with and fully retractable landing gear which q would not come down, causing McKeen to make a spectacular belly landing only scratching the paint on the wing and bending the prop. McKeen probably made a little money from newsreel photographers who captured this landing on film!
In 1939 the plane was converted back to its original wing and landing gear but crashed on the first lap of the race, killing pilot Lee William's and destroying the plane.

In 1936 Larry Brown designed the B-3 which was used for a test bed for the 544 cu. in. 290 hp. Menasco Super Buccaneer engine and was never raced although it was used in a number of movies as a Spitfire, and Me-109 or an American Army test flighter.

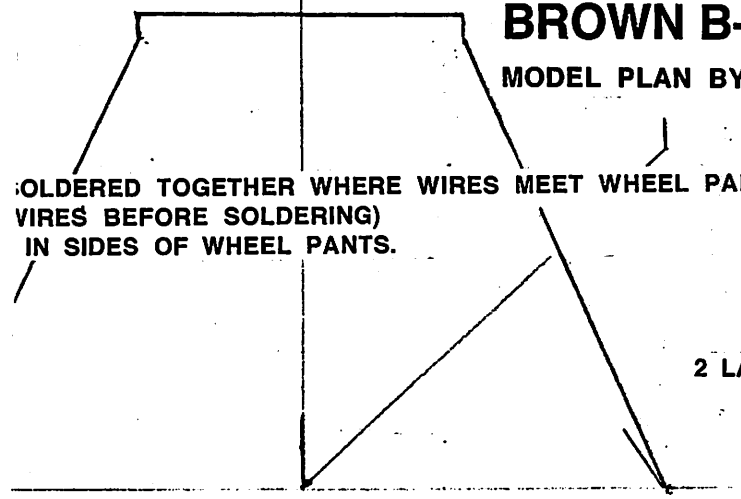
Thanks Steve, but I'm just a little ole ant on the rubber tree plant haulin' stick and tissue treasure before the big ant eater comes by. To borrow from Hudson Duster Michael J. Heinrich, " It Was a GOOD IDEA at the Time"- all the time. Build and fly lightly in all ways. R





BROWN B-1

MODEL PLAN BY STEVE GRIEBLING, CFFS FOR "CROSSWINDS", 2005

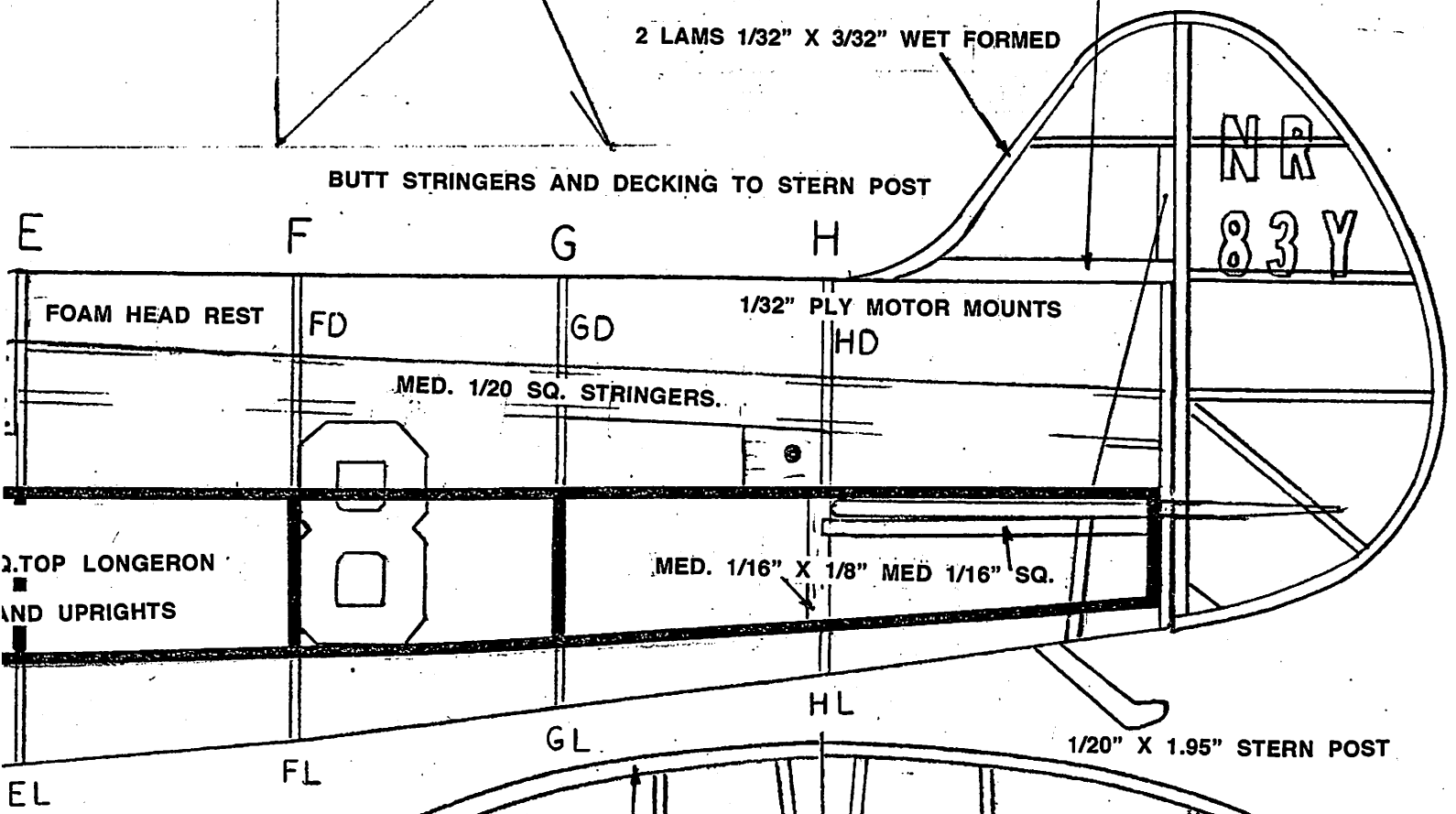


OLDERED TOGETHER WHERE WIRES MEET WHEEL PANTS.
VIRES BEFORE SOLDERING)
IN SIDES OF WHEEL PANTS.

RUDDER
LIGHT 1/20" X 3/32" RIBS AND SPAR
LIGHT 3/32" SQ.

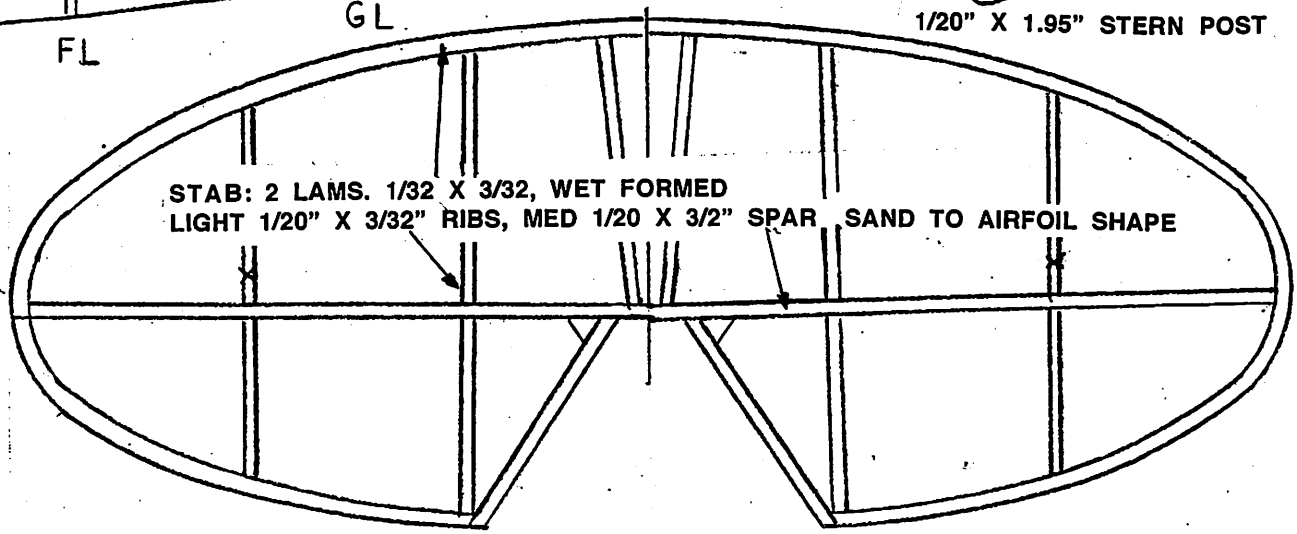
2 LAMS 1/32" X 3/32" WET FORMED

BUTT STRINGERS AND DECKING TO STERN POST



THEN
INTO FORMERS

HT 3/32" SHEET.





PS-11
Miss Los Angeles

(GDM)= GENE DUBOIS
Manufactured by Shive Specialt

PS-11	Miss Los Angeles .....
PS-20	Keith Rider R-4 Racer
PS-21	Laird Super Solution ..
PS-16	Bonzo Racer .....
PS-17	Republic P-39 Aircobr "Cobra
R-70	Seversky P-35 .....

.025 WIRE L.G. ARMATURE

SIDE

SAND 3 DEGREES DOWN THRUST AND
2 DEGREES RIGHT INTO NOSE BLOCK

-2°

.025 WIRE L.G. ARMATURE

SPREADER IS , .025 WIRE BOUND AND SOLDERED TO L.G. LEGS BEFORE ADDING PANTS AND WHEELS.

15°

1/2"LIGHT BALSA NOSE BLOCK. 1/32" PLY FACING 1/32" PLY BEARING PLATE WITH HARD BALSA OR PINE KEY SNUG FIT TO NOSE PLATE

.003 ACETAT

BT CT DT ET

PINE KEY

Miss Los Angeles

BOX FRAME IS 1/16" SQ. MED.; MED. 1/16" WING SADDLES

INSTALL 1/16"X 1/8"RAILS AFTER WING IS IN POSITION, THEN ADD FO STRINGERS AND COVER.

C.G.

A BL CL CL DL EL

-3°

EXHAUSTS RIGHT SIDE ONLY

PITOT

A

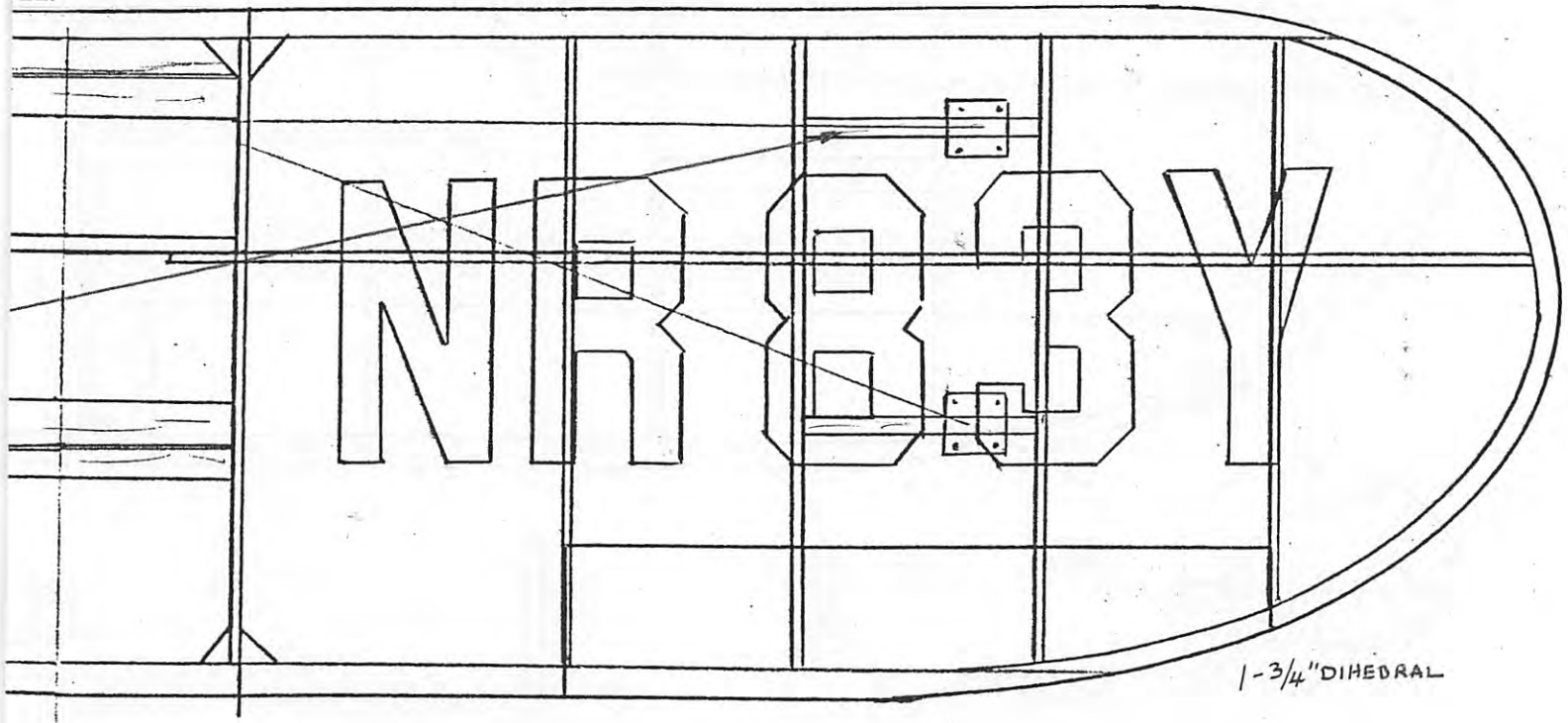
3/4" DIA. WHEELS

COLOR SCHEME:
BRIGHT RED OVERALL WITH GOLD LETTERING OUTLINED IN BROWN.

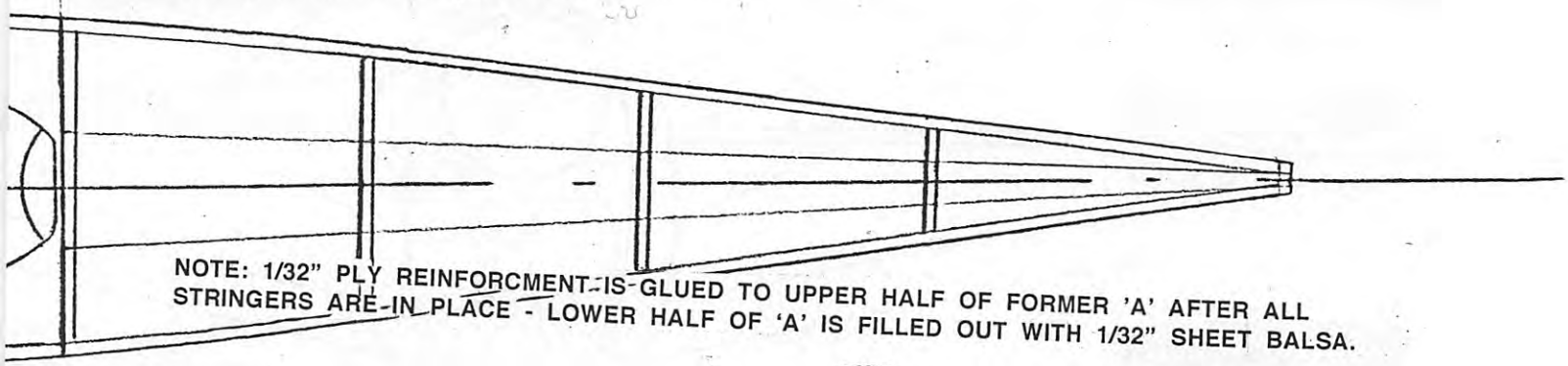
PS-7	Gee Bee R1	13"	17.50
PS-9	Mr. Mulligan	13"	14.95
PS-12	P-Shooter	13"	15.95

PVHC kits the Dubois Miss Los Angeles Peanut at $ 15.95

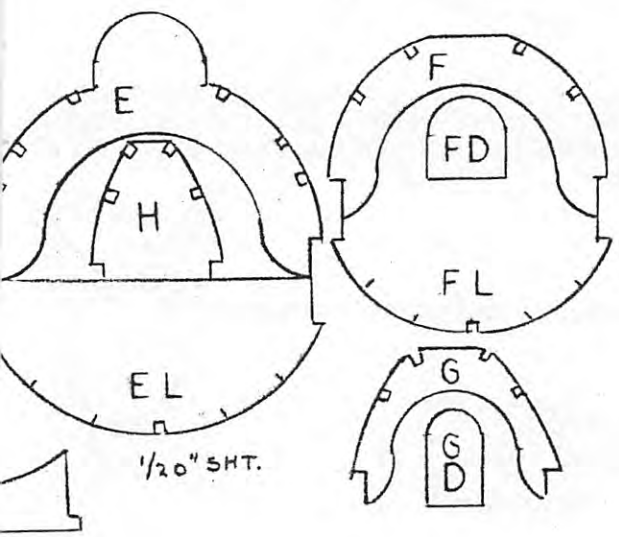
ROM "SHORTY'S BASEMENT"
CROSS TOP OF FUSELAGE BECAUSE OF
DEL.

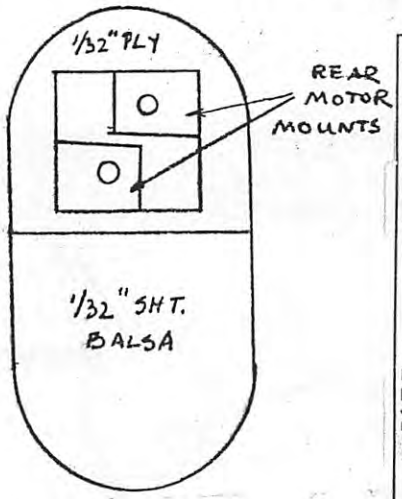


EN ADD ALL OTHER FORMERS AND TOP STRINGERS.



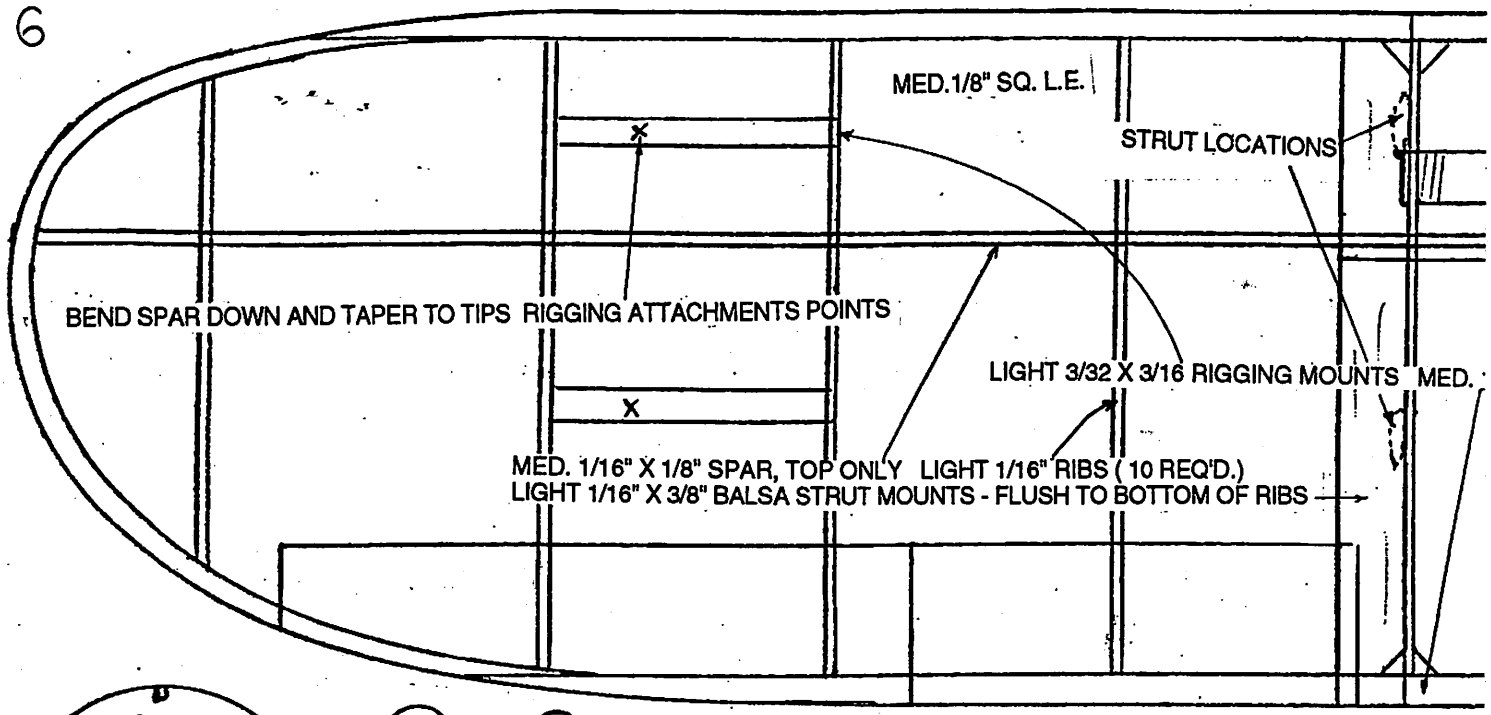
NOTE: 1/32" PLY REINFORCMENT IS GLUED TO UPPER HALF OF FORMER 'A' AFTER ALL STRINGERS ARE IN PLACE - LOWER HALF OF 'A' IS FILLED OUT WITH 1/32" SHEET BALSA.

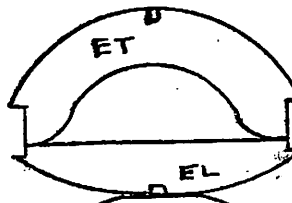




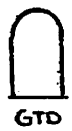
BROWN B-1

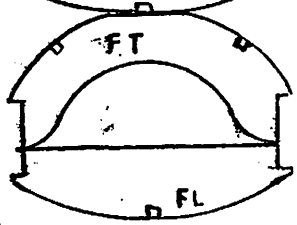
DIELS ENGINEERING, INC.
P.O. BOX 263
AMHERST, OHIO 44001
KIT #40 REPUBLIC P-47 THUNDERBOLT
U.S. ARMY AIR FORCE FIGHTER. VERSIONS INCLUDE P-47D & N (RAZORBACK & BUBBLETOP)
1/24th Scale
P-47N version built by John Ernst
20.4" Span P-47D
21.3" Span P-47N
Rubber Powered Free Flight Scale Kit includes printed plans, printwood, stripwood, decals, Japanese tissue, plastic prop and hardware, rubber, and formed plastic canopy (both styles).
$33.95 for each kit plus $7 each shipping
Catalog $2 or free with order.
We now accept payment by PayPal
http://pageproducer.acninc.net/dielsengr/

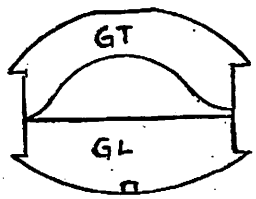




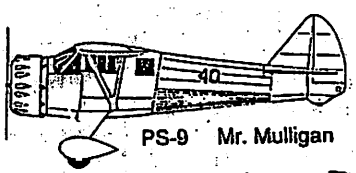










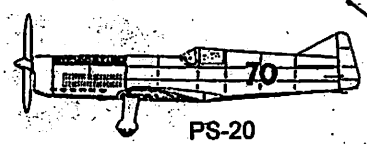


PS-9 Mr. Mulligan



PS-16 Bonzo Racer

LIGHT 3/8" SHEET SANDWICHED BETWEEN 1/8" SHEET CUT GROOVE IN INSIDE COVERS TO ACCEPT .025 WIRE L.G. LEGS - CEMENT AND THEN FILL GROOVE WITH THIN BALSA STRIP AND SAND SMOOTH. 3/4" DIA. WHEELS .025 WIRE L.G. ARMATURE. SPREADER IS , .025 WIRE BOUND AND SOLDERED TO L.G. LEGS BEFORE ADDING PANTS AND WHEELS.



PS-20
Keith Rider R-4 Racer



PS-12 P-Shooter

Photo: Editor's Collection

Ostrowski, SKYWAYS Editor.

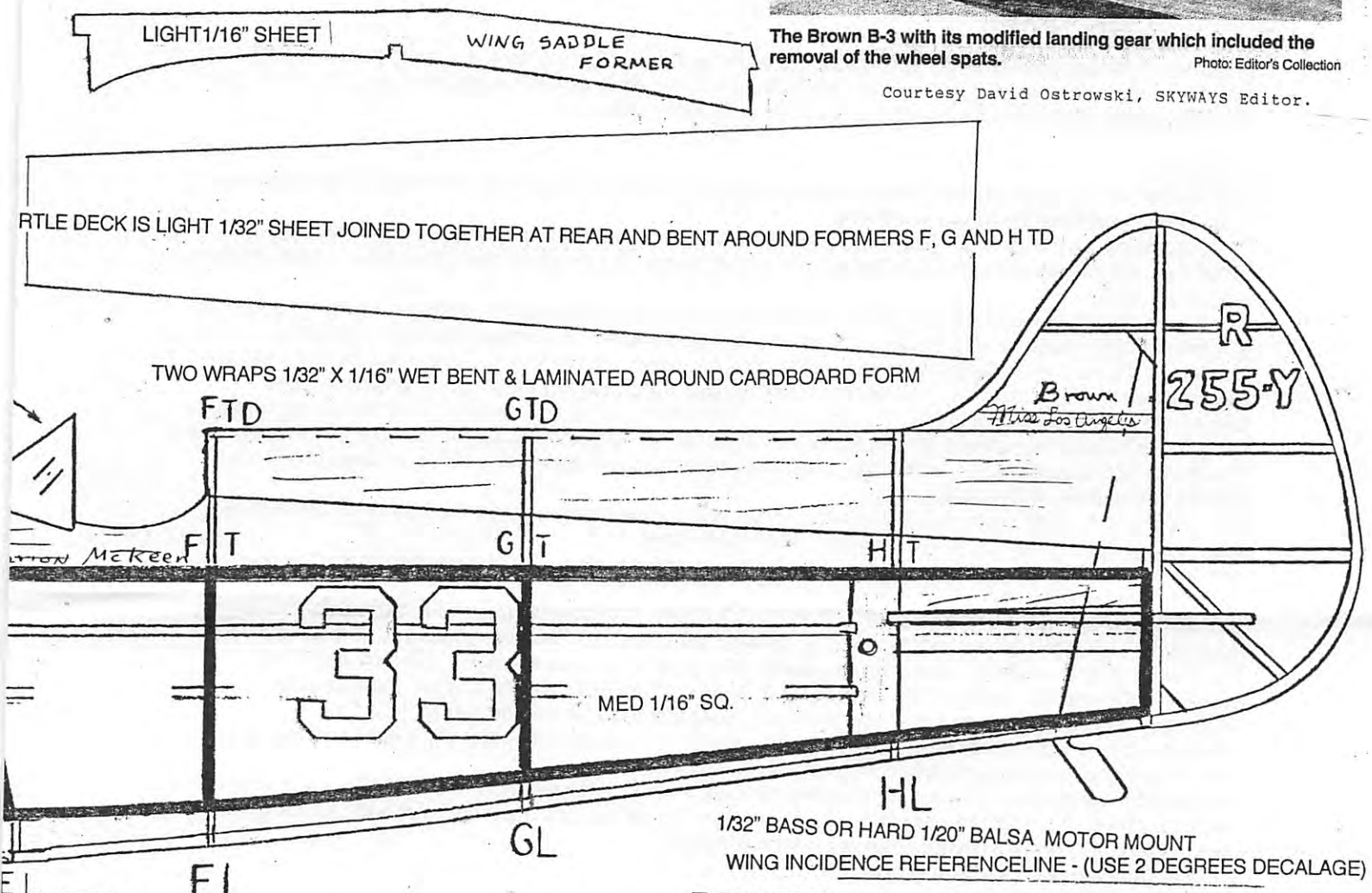
PROP SPINNER

Los Angeles ON COWL

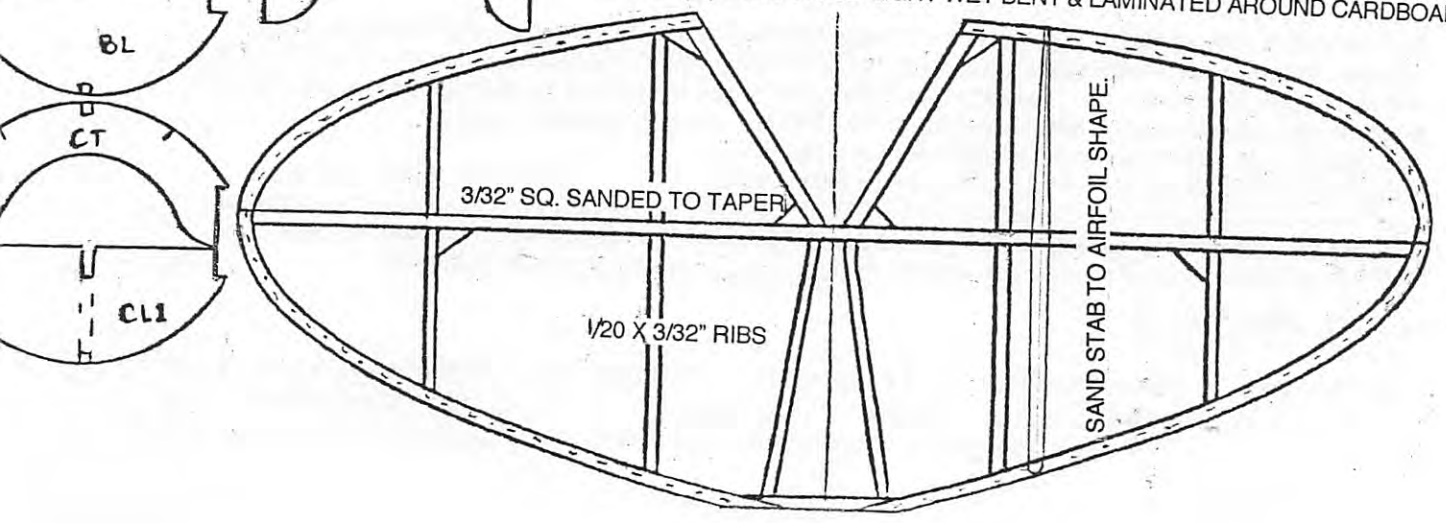


The Brown B-3 with its modified landing gear which included the removal of the wheel spats. Photo: Editor's Collection

Courtesy David Ostrowski, SKYWAYS Editor.



BROWN B-2, VERSION WITH RETRACTABLE LANDING GEAR



BROWN B-1 MODEL ASSEMBLY

Construction of the wings and tail feathers is conventional except that the stabilizer and rudder are built 3/32" thick and sanded to an airfoil shape so that their edges are basically about 1/32" thick, while the spars are kept 3/32" thick to reduce warpage.

WING AND LANDING GEAR:
Complete the landing gear assembly after the wing is added to the fuselage, but the wire armature must be added before the wing is covered. Cut a slit for each end of the wire in the landing gear mounts before you add them to the wing, then simply slip them in place and glue the wires to their top surfaces.

FUSELAGE:
The fuselage construction sequence and assembly of the model is critical because of the engine compartment vent around the cowl and the placement of the wing.
The side frames are built of 1/16" square, but only the top longerons and the first 1/20" sq. stringers immediately above them are from medium hard balsa because they must support the tension of the rubber motor. Other structure is of lighter stock.
Join the side frames at the rear as usual and insert the front of the longerons into the notches in former 'A'. When the glue has set up for these, insert pre assembled formers 'C' and 'C prime'. The forward edges of C' should be chamfered all around to represent the cowling vent before it is assembled to former C. These two must be perfectly aligned including the center slot for the top 1/16"x 1/8" stringer. After inserting formers C-C', add all the other formers. Pre-assemble saddle former 'M' to formers CL and W2 on their centerlines to be sure the spacing is exactly correct. The topmost curvature of 'M' should be level with the lower longerons before it is permanently glued in place. (Check this with a straight edge). The longerons at this position assure that the wing saddle will be perfectly level with the box structure when it is installed.
Now add the 1/16" x 1/8" center, forward stringers. Notch them a little for each former to align the formers and keep them vertical. (The notch for C-C' will have to be nearly 5/16" long).
Add the rear plywood motor mounts so they are lying along the edge of former 'G' and glue them to the top longerons and to the front of this former.
Cut notches for the 1/20" sq. stringers with a thin file or sandpaper strip glued to a piece of 1/20" stock. The notches in former 'H' should be right against the top of the plywood motor mounts. File other notches as necessary to keep the stringers nice and straight, using the pre-marked notches in 'A' as a starting point. **DO NOT ADD THE LOWER STRINGERS UNTIL THE WING HAS BEEN COVERED, DOPED AND INSTALLED!**
All stringers butt against the stern post which has been glued to the rear of the side frames.
The stringers next to the head rest decking should be about 1/32" away from the sides of the deck so covering will make a 90 degree bend at the bottom of the deck.
The deck is made of light 1/32" sheet balsa, wetted and bent around the formers 'FD' , 'GD' and 'HD' . I recommend a tiny drop of "Hotstuff" to adhere these formers to the decking. (It will set up immediately when wet). Glue the formed deck to former 'ED' and the sternpost with regular model cement.
Cover the fuselage down to the wing mount.

MOUNTING THE WING AND LANDING GEAR:
Cover and dope the wing and insert it into the fuselage, then add the lower stringers and cover the rest of the fuselage. Cut stringers and longerons away over the groove between former C and C' and paint this groove black to represent the engine vent.

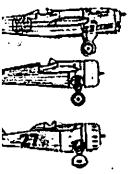
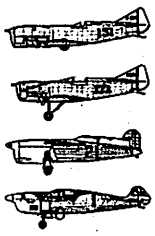
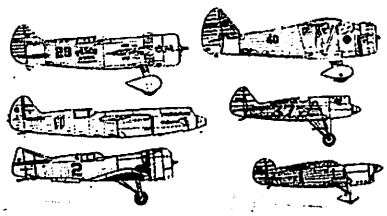
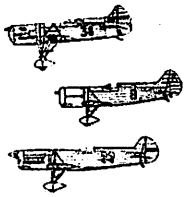
After the wing is covered, doped, installed in the fuselage and the fuselage is covered and doped, add the wheel pants and wheels. Cut a narrow slot in the pants for the wire making sure the axle will be in the correct location for the wheels, then fill this slit with glue to hide and secure the wires. When dry, add the struts, filing a narrow slit in each to accept its respective wire, cover with tissue, glue to the pants and dope the assembly yellow.
The color scheme of the Brown B-1 is all yellow with black lettering.
Since the nose block is flat, you will have to use a prop with a straight rear edge or put a 3/32" spaced behind the prop. I recommend a 7" diameter "Bottle Prop" with a P/D ratio of 1.3:1 made of 1/32" bass wood glued to a hardwood hub. Use of a removable freewheeler is also recommended. This will allow easy change of propellers in case of breakage or if you want to try different diameters or pitches of props to get the maximum flight times.

FROZEN MEATBALLS

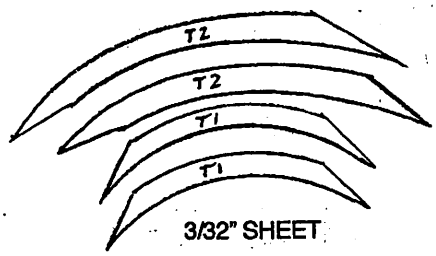
Dec 4, '05 Pinkham Field Irregulars Indigenous Japanese Military contest 1ST Annual (Neverbin) on first Sunday of Dec. Indigenous Snow and Bad Weather may have cancelled this.

BY

R.S. HIRSCH
8439 DALE ST
BUENA PARK, CAL. 90620

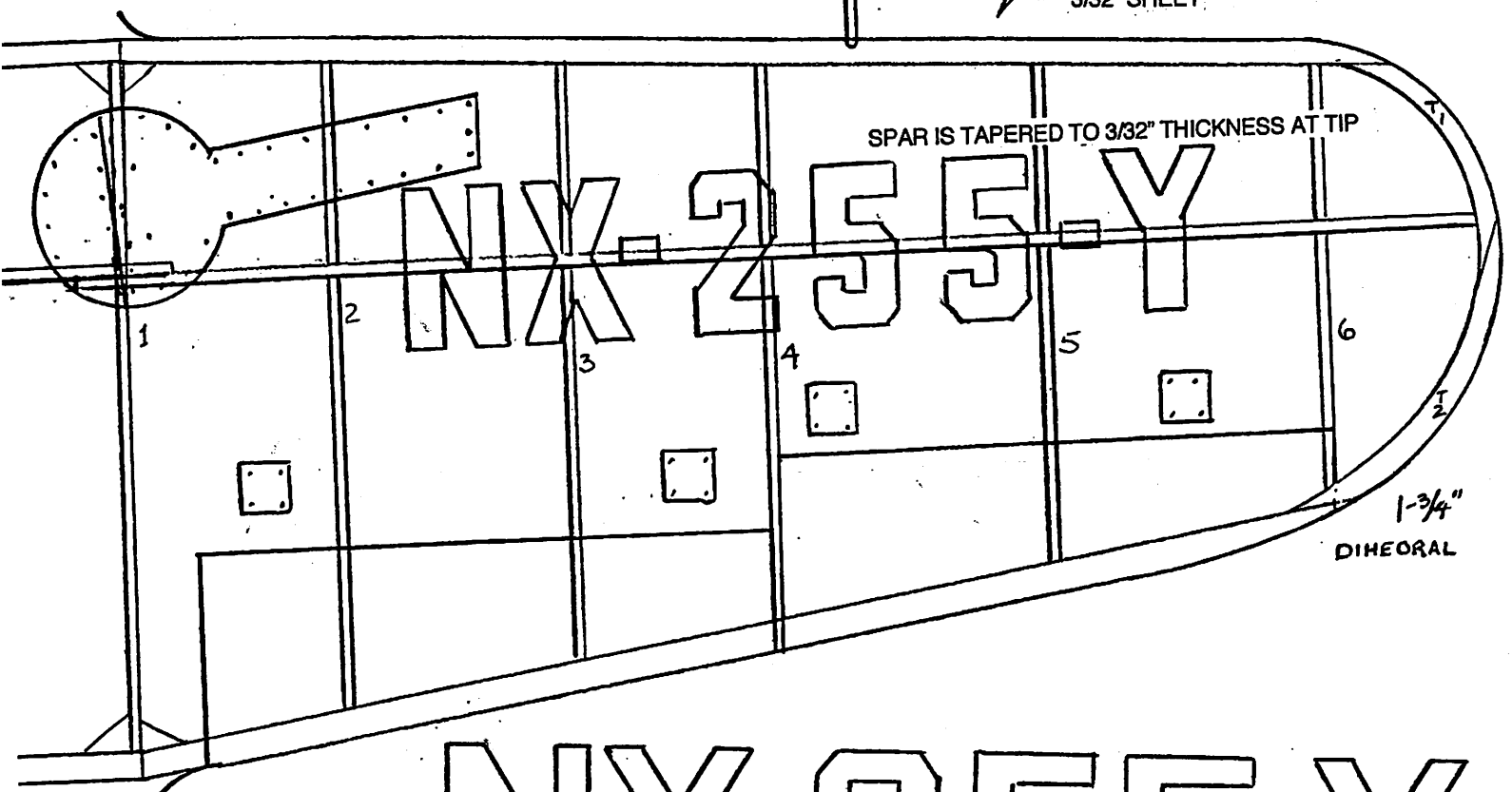





L.E. TAPER



3/32" SHEET

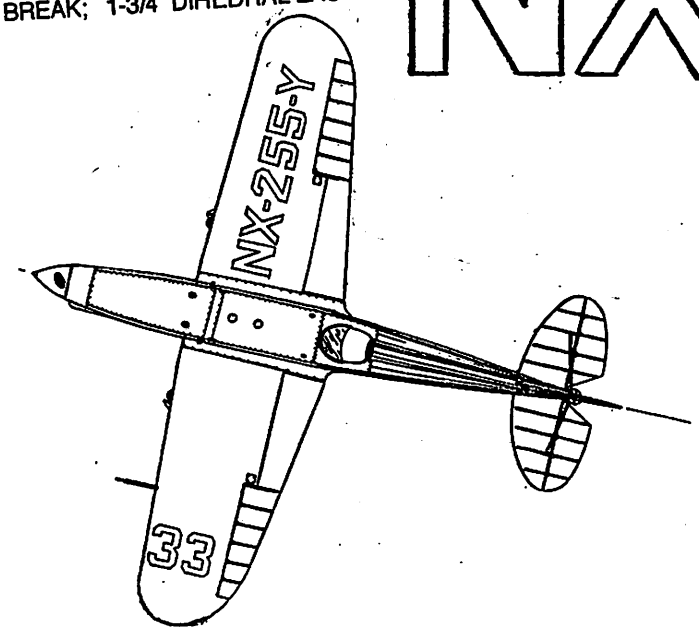
SPAR IS TAPERED TO 3/32" THICKNESS AT TIP

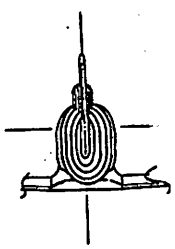


1-3/4"
DIHEDRAL

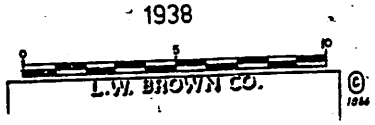
NX-255-Y

AL BREAK; 1-3/4" DIHEDRAL EACH TIP.





1938



Brown B-2 Model

Construction of the model is conventional throughout except for the installation of the landing gear, and the turtle deck.

Note that the wire armature for the L.G. is located at the rear edge of the L.G. struts. This is so the landing gear can bend backwards without puncturing the wing covering in case of a hard landing. The wires are bent forward when they reach the top of the wheel pants so their axles will be centered in the pants for the wheels. Slot the pants with a razor saw for insertion of the wires. The wires are then to be covered with model cement to secure them to the pants and hide them. The top of the wire armature should be bound with thread and cemented to the landing gear support in the wing before the wing is covered. Leave the L. G. struts till later.

The turtle deck is very easy to make. Use very light "A" grain 1/32" sheet balsa for the decking, wet it with water and bend it into a channel. Pinch the rear end together and apple a little "Hot Stuff" to hold it, then insert the formers FTD, GTD and HTD at their respective locations and hold them in place with a small amount of "Hot Stuff". The "Hot Stuff" will solidify almost immediately when it comes in contact with the wet balsa. Attach the completed deck to the tops of formers F, G and H with model cement after the balsa deck has dried out. The rear end of the deck ends at the rudder spar.

Leave the underside of the fuselage uncovered until the wing has been installed. After the wing has been covered, doped and installed and the fuselage has been completely covered and doped, add the landing gear struts. Tack glue their rear edges to the wires after you have sanded them to a streamlined section, then cover them with tissue to hold the wires in place and conceal them. Cement the struts to the pants, but do not cement them to the wing so they will be free to bend back.

Rigging may be made from silk thread or "Lycra" from "Shorty's Basement". Because of the great increase in dihedral on the flying model, let the top wing rigging pass over the top of the fuselage rather than through it as on the full size aircraft. The rigging between the landing gear pants can be made of thin music wire or Lycra.

"Miss Los Angeles" was all red with gold leaf lettering. You can obtain shiny, gold Mylar wrapping film from craft stores and cut it with a very sharp #11 Xacto blade; it can be attached with clear dope.
The model can be powered with 4strands of 1/8" rubber swinging an 8" diameter prop. You will have to put a 3/32" long spacer behind the prop to clear the flat nose block or use a basswood "Bottle Prop" with a straight rear edge.

Brown B-2, 1938 version with retractable landing gear.

Although the full size Brown B-2 of 1938 used the most of the same fuselage as the original, I have elected to draw a new fuselage for the model, because the wing on the retractable L.G. 1938 version appeared to have been moved downward so the lower surface of the wing, containing the retracting gear, would be completely exposed. This meant that the wing attachment would need to be revised for the model. I suspect a similar relocation was made to the full sized aircraft as well.
The 1938 version of the B-2 is simpler to build as a model than the original because it has no landing gear to complicate matters.
The wing can be installed after the fuselage has been completely covered.
Note that the wing saddle on this version is made of light 1/32" sheet contoured by the wing saddle former. The saddle is glued to the saddle former and comes in contact with the lower longerons at its high point. This keeps it perfectly aligned with the box frame. After the saddle has been installed, sand its edges to blend in to the contour of formers CL and EL. It will support the covering without a problem.

I have not shown the landing gear in the "down" position because it is not required for Flying Aces competition, but if you want to add landing gear for display you may improvise from the shape of the retracted gear shown on the wing drawing.

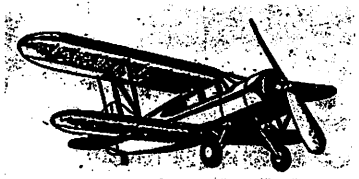
"Shorty's Basement" is at 1036 Bexley Ave., Marion, OH 43302; Phone: (740) 223-7471
Shorty's sells Aerographics kits, West Wings kits, Rapier jet motors and a few accessories for rubber powered models including a fine fuse igniter and stretchable, very thin and strong Lycra rigging thread.

Steve Griebling, CFFS for "Crosswinds" - 2005

SS-200 Waco YKS ..... 26" 34.95

PVHC POST 12/7/'41 PEARLS:

DIE 33 Aichi B7A2 Ryusei "Grace"	23.6WS	$ 2801
DIE 35 Nakajima B5N2 "Kate"	25.5 WS	$ 27.98
GAR 21 Kawasaki Hein	24" WS	$ 20.00
EASYB FF 95LC Mystery Tailless+J	Trim	$ 19.57
GDM PS-11 Miss Los Angeles	13"	$ 15.95


SS-200 Waco YKS

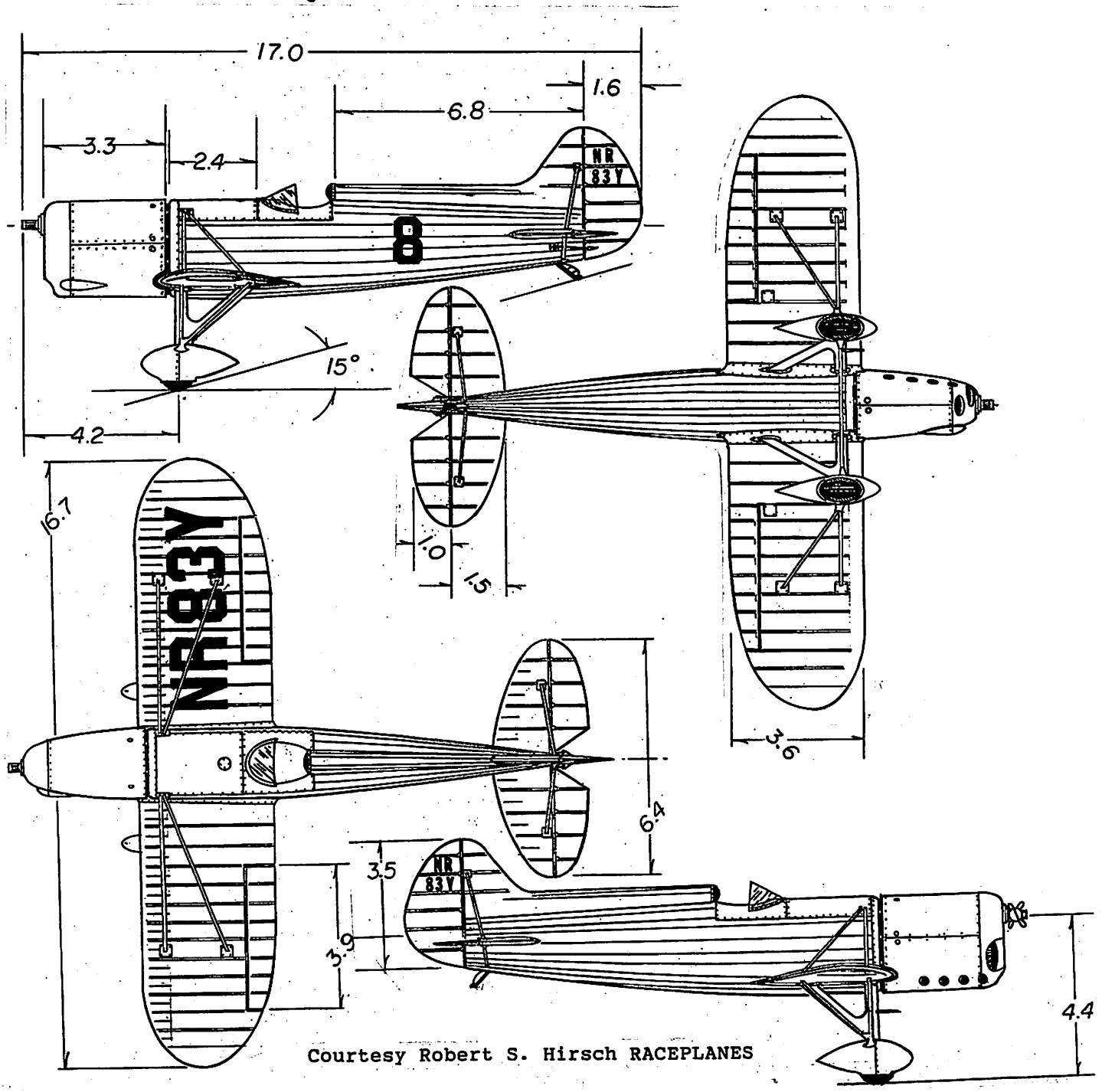
Greetings Fellow FreeFlighters,

The end of the flying season is drawing near. There are two more chances for FF glory at local contests scheduled on 9/18 and 10/2 at our LCCC flying site. Hope to see you there.

Our monthly dinner meeting is set for this Thursday (9/15) at 7:00PM at Dimitri's Restaurant. It's time to start planning our winter flying activities. Bring along your ideas. Also bring along your latest project for "show and tell."

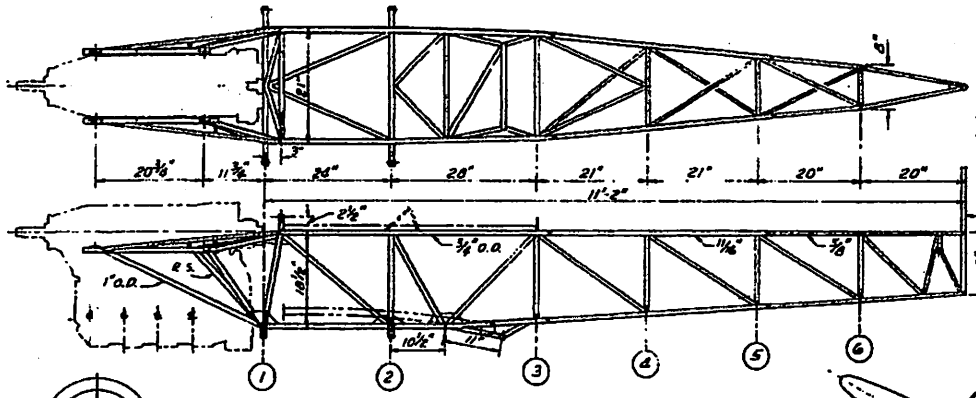
Dimitri's is located in the Midtown Plaza, 1830 Snow Road, at the corner of Broadview Rd. It's a short hop west of the Rockside exit off I-77.

Rich Weber / Wingnut

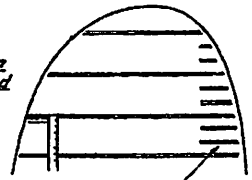


Courtesy Robert S. Hirsch RACEPLANES

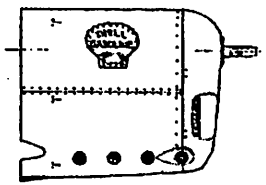
The next CFFS thursday gathering is January 19 at Dimitri's. Rich Weber is taking suggestions for a change from third thursdays.



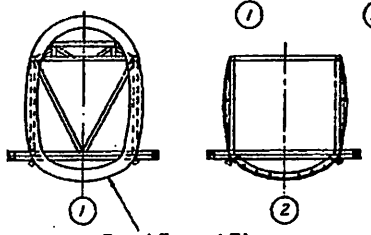
Gusset Plates On Bottom Fuselage Stringers Added When Ship Was Rebuilt



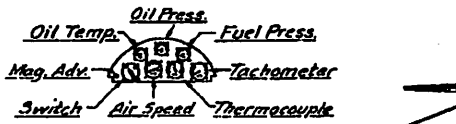
False Ribs On Under Wing Surface

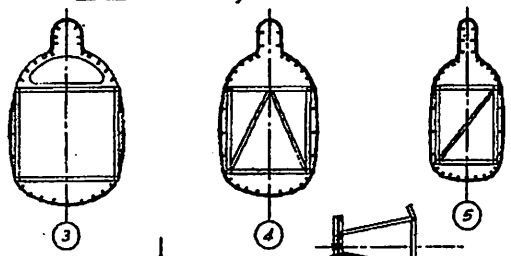


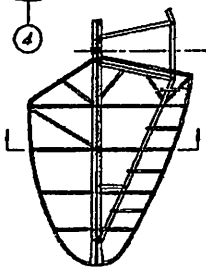
Construction:
Wing - Two Solid Spruce Spars, Ribs Spruce And Basswood, Fabric Covered. Curtiss Airfoil Section With Thin Leading Edge.
Fuselage - Welded Steel Tubing, Sheet Dural Cowling And DeckKing. Headrest Fairing Plywood Covered. Wood Stringers Sides And Bottom Fabric Covered.
Tail Surfaces - Welded Steel Tubing Fabric Covered.
Wing Mounted With 1° Of Incidence.

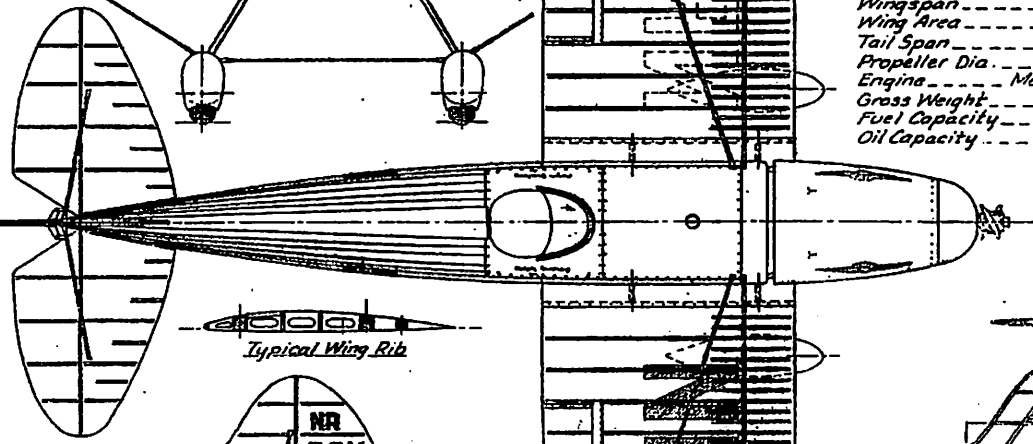


Dural Formed Ring

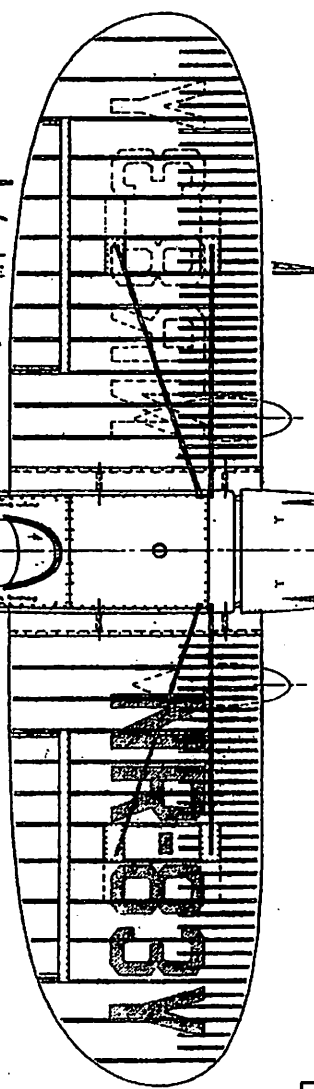


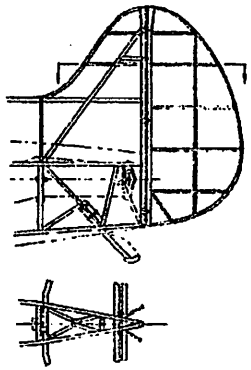


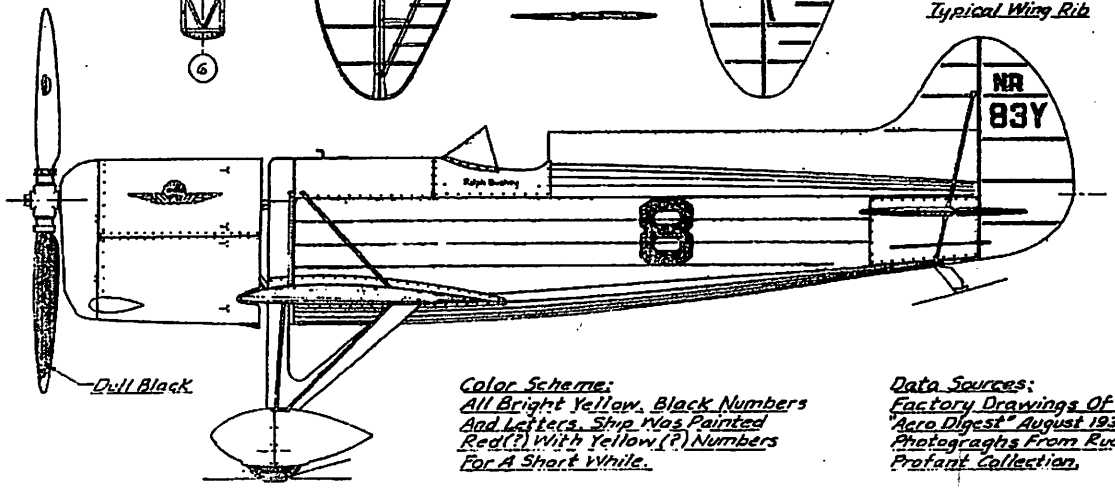




Typical Wing Rib







Dull Black

Color Scheme:
All Bright Yellow, Black Numbers And Letters. Ship Was Painted Red(?) With Yellow (?) Numbers For A Short While.

Data Sources:
Factory Drawings Of B-1
"Aero Digest" August 1934
Photographs From Rudy Profant Collection.

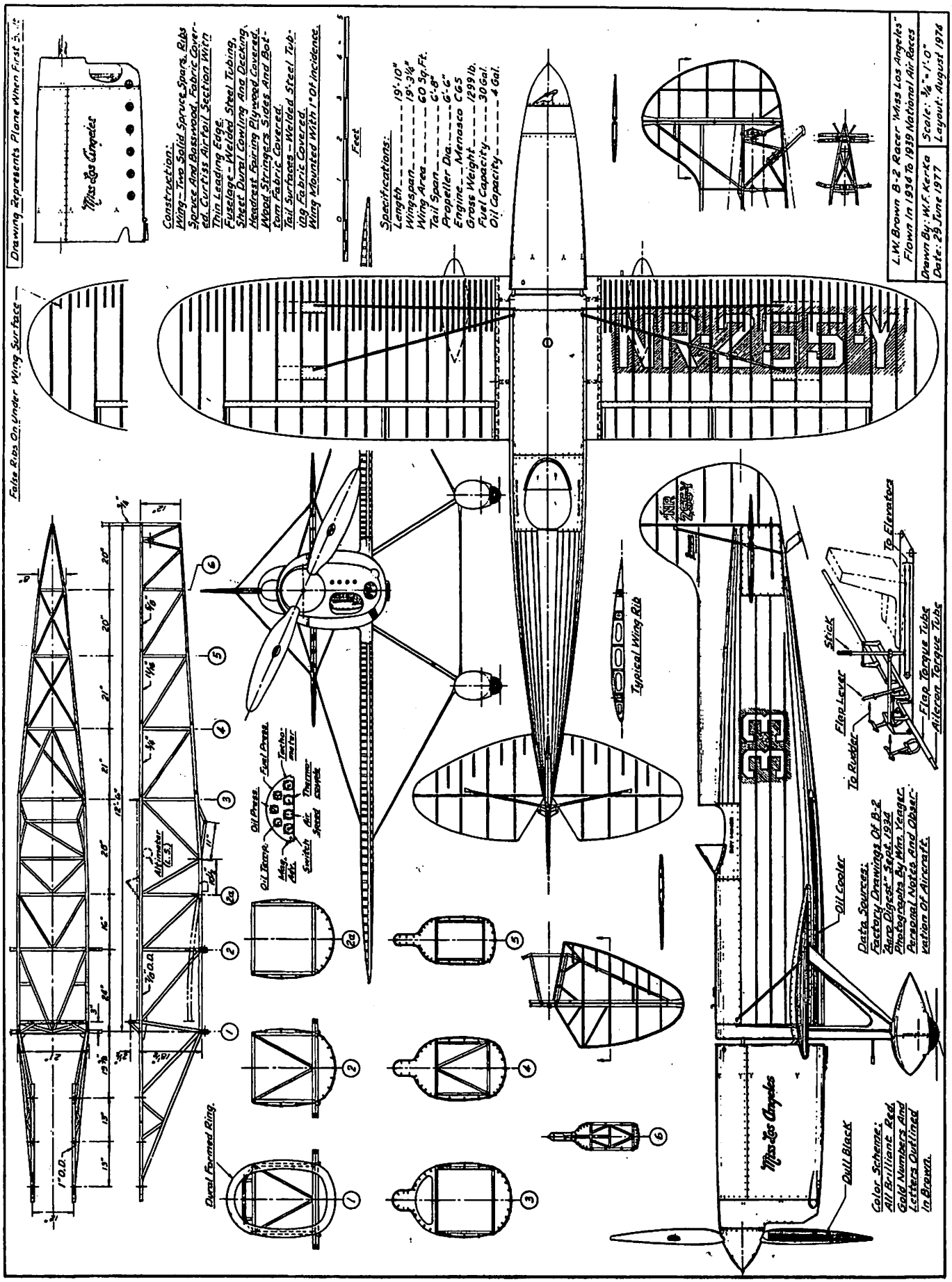
Specifications:

Length	16'-9"
Wingspan	16'-9 1/8"
Wing Area	50 Sq. Ft.
Tail Span	6'-8"
Propeller Dia.	6'-0"
Engine	Menasco C4S
Gross Weight	964 lb.
Fuel Capacity	20 Gal.
Oil Capacity	3 Gal.

0 1 2 3 4 5
Feet

L.W. Brown B-1 Racer
Built In 1934 For Ralph Bushey

Drawn By: W.F. Kerka | Scale: 3/4" = 1'-0"

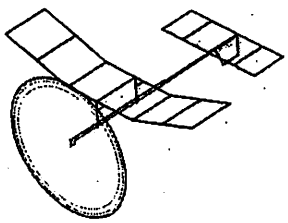

L.W. Brown B-2 Racer "Miss Los Angeles"
Flown in 1934 to 1939 National Air Races
Drawn By: W.F. Kerka
Date: 29 June 1977
Scale: 3/4" = 1'-0"
Layout: August 1974
Drawing Represents Plane When First Built
Miss Los Angeles
Construction:
Wing – Two Solid Spruce Spars, Ribs Spaced And Basswood, Fabric Covered. Curtiss Airfoil Section With Thin Leading Edge.
Fuselage – Welded Steel Tubing, Sheet Dural Cowling And Decking, Headrest Fairing Plywood Covered, Wood Stringers Sides And Bottom Fabric Covered.
Tail Surfaces – Welded Steel Tubing Fabric Covered.
Wing Mounted With 1° Of Incidence.
Feet
Specifications:
Length – 19'-10"
Wingspan – 19'-3⅜"
Wing Area – 60 Sq. Ft.
Tail Span – 6'-8"
Propeller Dia. – 6'-6"
Engine – Menasco C6S
Gross Weight – 1299 lb.
Fuel Capacity – 30 Gal.
Oil Capacity – 4 Gal.
False Ribs On Under Wing Surface
Typical Wing Rib
Stick
Elev. Lever
To Rudder
To Elevators
Flap Torque Tube
Aileron Torque Tube
Oil Cooler
Data Sources:
Factory Drawings Of B-2
Aero Digest" Sept. 1934
Photographs By Wm. Yeager.
Personal Notes And Observation Of Aircraft.
Color Scheme:
All Brilliant Red.
Gold Numbers And Letters Outlined In Brown.
Dull Black
Dural Formed Ring.
Oil Press.
Fuel Press.
Tacho-meter
Oil Temp.
Magn. Adj.
Switch
Air Speed
Thermo-couple
Altimeter (C.S.)
1" O.D.
¾ O.A.O.

THE CLEVELAND FREE FLIGHT SOCIETY

A.M.A. sanctioned Indoor Contest

SATURDAY, April 22, 2006 Kent State University Fieldhouse

SCHEDULE of EVENTS **(AMA & Jetco)**



8:00 a.m. -- Building opens (test flying)

8:30-11:30 a.m. 1. *Hand Launch Glider*

2. *Standard Class Catapult Glider.* AMA Rules

8:30 a.m. to 4:00 p.m.

3. *EZB* - Scoring is the best of five officials. 60 seconds minimum. Two attempts/flight.

4. *Limited Penny Plane*

5. *Mini-Stick* - - Best flight of 5 officials. 20 second minimum. 2 attempts/Flight.

9:00 a.m. to 3:00 p.m.

6. *Seven Gram Bostonian* - A.M.A. rules.

7. *Jetco R.O.G.* - CFFS Rules.

F.A.C. EVENTS

10:00 a.m. to 4:30 p.m.

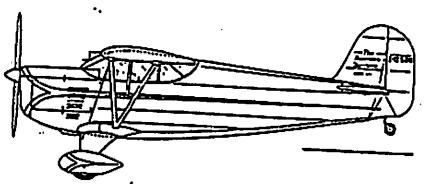
8. *Hi-Wing Peanut*

9. *Peanut Scale* - All other except pioneer models.

10. *W.W.I Peanut Biplane Combat* - **4:05 p.m.**

11. *Golden Age Civil Scale*

12. *Dime Scale*



13. *W.W.II No-Cal Combat.* Flown at **4:20 p.m.** **Minimum weight - 6.2 grams without motor.**

14. *No-Cal Profile Scale* (3 flight total) **Minimum weight - 6.2 grams without motor.**

15. *Phamtom Flash* - Best two of five officials.

16. *WW II Combat* - Flown at 12:30

Please Note: No event for pioneer models and they may not fly in other events.

Different models must be flown in WWII and No-Cal Profile Scale.

For Your Information

1. All events are JSO combined.
2. Steering of Models: as per A.M.A. rulebook.
3. Entry Fees: - *Open* - $30.00 - *Junior* $2.00
   Sponsored S.O. school groups $10.00.
4. VERY IMPORTANT - You must provide your own table and chair.
5. KSU Fieldhouse is a non-smoking facillity.
6. **No Indoor RC flying permitted during the contest and all flyers must have a valid AMA license.**

Science Olympiad 9:30 to 3:00

AWARDS There will be two Contest Grand Champions based on the following criteria:

3 points for a first place
2 points for a second place
1 point for a third place

Award Categories

1. AMA events and Jetco ROG 2.FAC events including Phamtom Flash

Prizes will be awarded for 1st, 2nd, and 3rd in each category. There also will be certificates. There must be 3 flyers in an event to earn points.

Contest Directors

Michael C. Zand
5803 East Ash Road
Independence, OH 44131
216-524-3480 *imzand@hotmail.com*

Larry Mzik
117 Sycamore Drive
Painsville, Oh 44077
440-357-7361 **lmzik@core.com**

Jetco R.O.G Rules

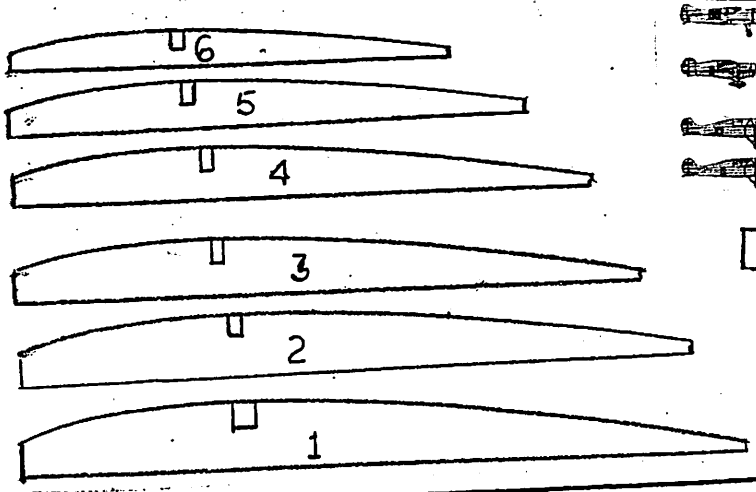
1. Build from plan with no structual changes.
2. Any commercial plastic prop may used. It may be cut down to 5½". Prop may be altered by sanding and/or cutting to size.
3. Tissue covering.
4. Model must R.O.G.
5. Unlimited attempts. Official flight is 20". 2 attempts equal 1 official. Best of 5. An attempt is an R.O.G.
6. Any prop bearing or prop hangar may be used.
7. Center section of wing may be flat.
8. Minimum weight of model without rubber is 3.5G.
9. No camber(baggy tissue).

Phamtom Flash Rules

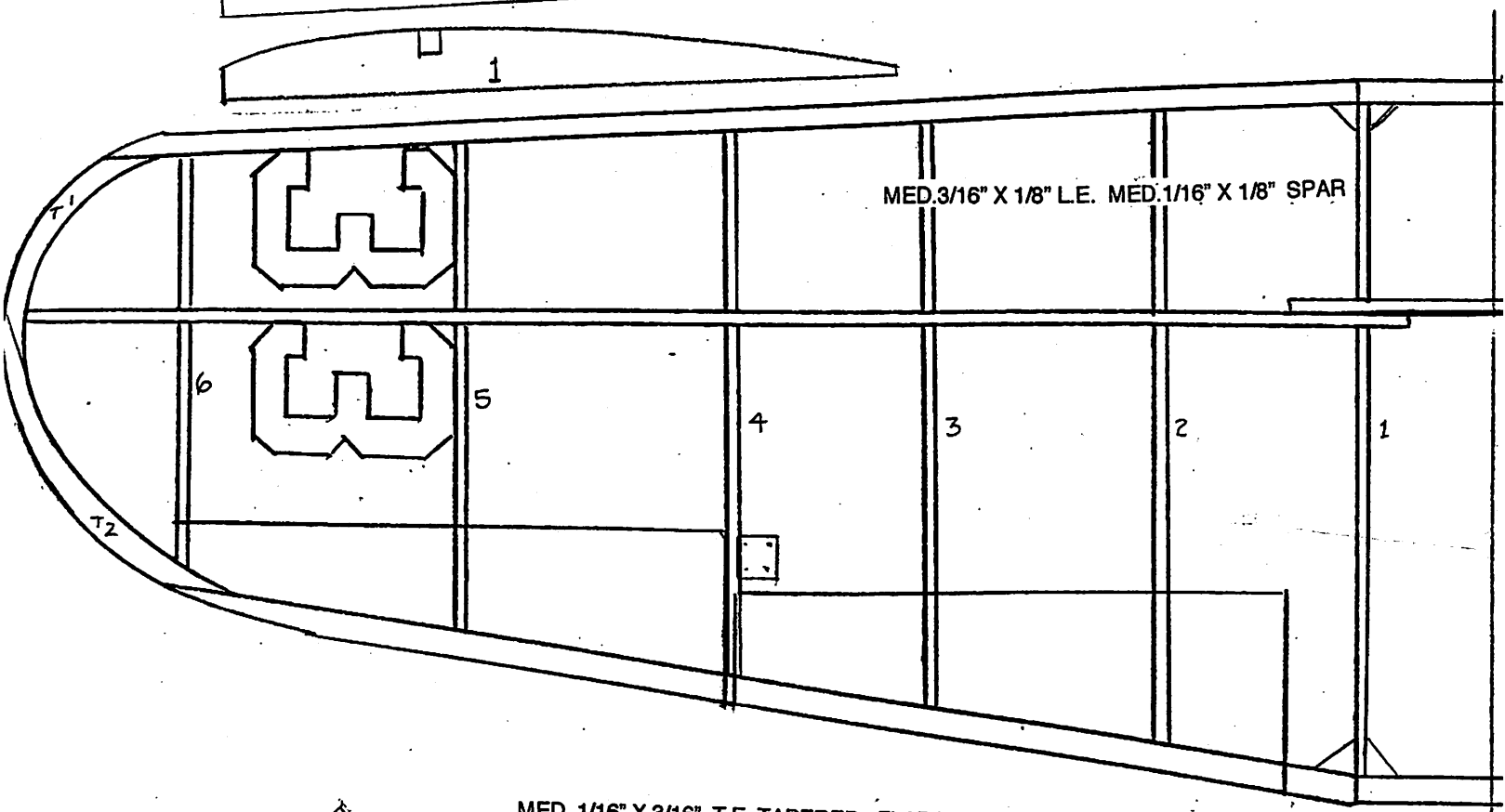
1. Model must be built according to plan. Wheels must turn and any type of prop may be used.
2. Markings must be on model, either cut from the plan or similar paper.
3. Rubber band to hold wing is optional, but model must weigh a minimum of 3.5g without motor.

Scoring - Total of 2 qualifying flights (20" official).

1/16" SHEET



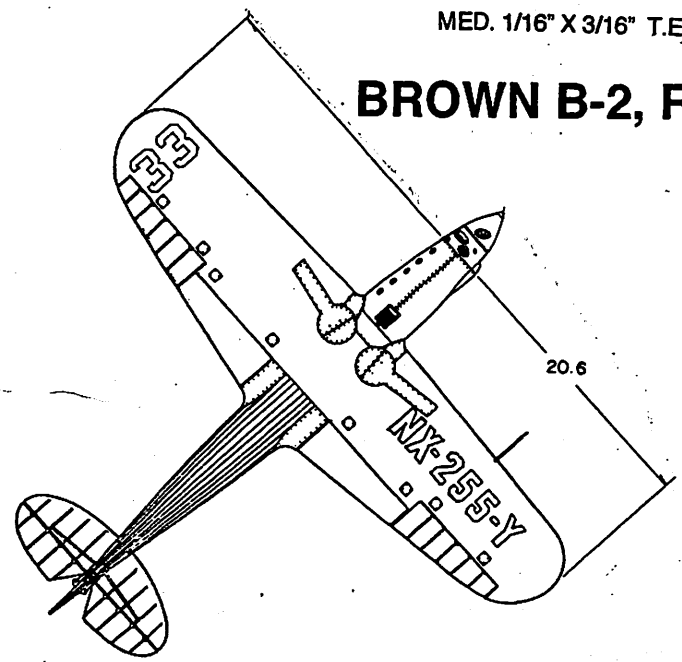
LIST OF RACEPLANES & SCALE DRAWINGS

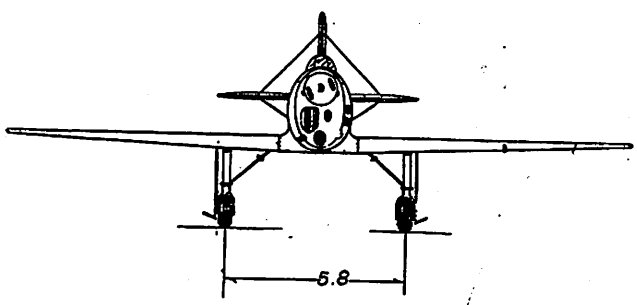


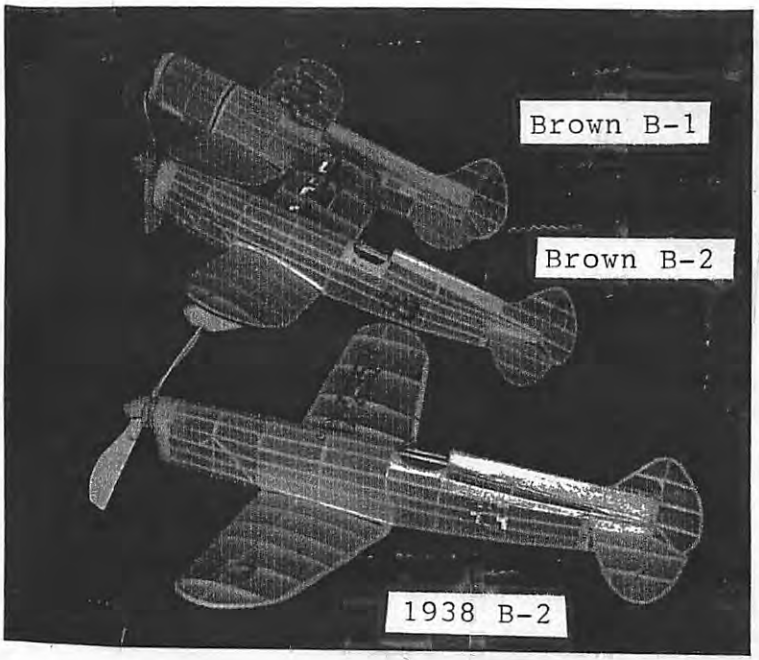
MED. 1/16" X 3/16" T.E. TAPERED. FLAP LINE AILERON LINE, TOP & BOTTOM

BROWN B-2, RETRACTABLE L.G. VERSION

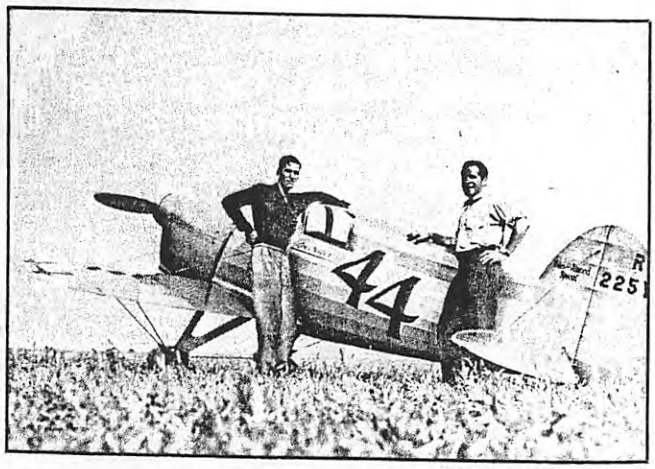
DIHEDR







Pilot Lee Miles, left and Leon Atwood with the ill-fated Miles and Atwood Special.

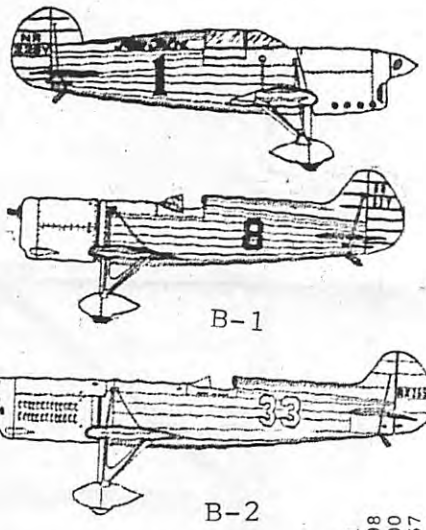


VINTAGE AIRPLANE

B-1'S TWIN, MILES & ATWOOD SPECIAL 11/83



Ozone ready red Miss Los Angeles



Mix or Match 3 or More Kits

With PVHC Price of $8.00 or more each, and Deduct $1.00 per Kit on the following Manufacturers:

Aero Graphics, Bell, BMJR, Brodak, Campbell, Diels, Dumas, Easy Built, Gene Dubois, Golden Age, Guillow's, Herr, Jetco, JorZak, Peck Polymer, R/N, RSM, Micro Models, Scale Flight, Schlueter, Shive Specialties, Sig, Today's Hobbies and Westwings.

PVHC CATALOG LIST $ 2

PVHC CATALOG LIST $ 2

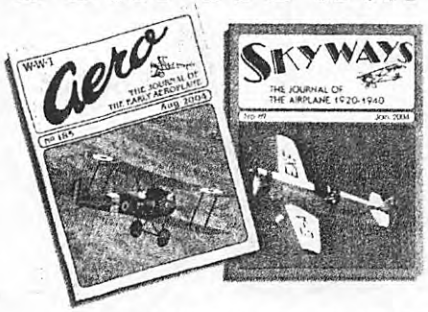
PVHC POST 12/7/'41 PEARLS:

DIE 33 Aichi B7A2 Ryusei "Grace"	23.6WS	$ 2801
DIE 35 Nakajima B5N2 "Kate"	25.5 WS	$ 27.98
GAR 21 Kawasaki Hein	24" WS	$ 20.00
EASYB FF 95LC Mystery Tailless+J Trim		$ 19.57
GDM PS-11 Miss Los Angeles	13"	$ 15.95

PVHC kits the Dubois Miss Los Angeles Peanut at $ 15.95

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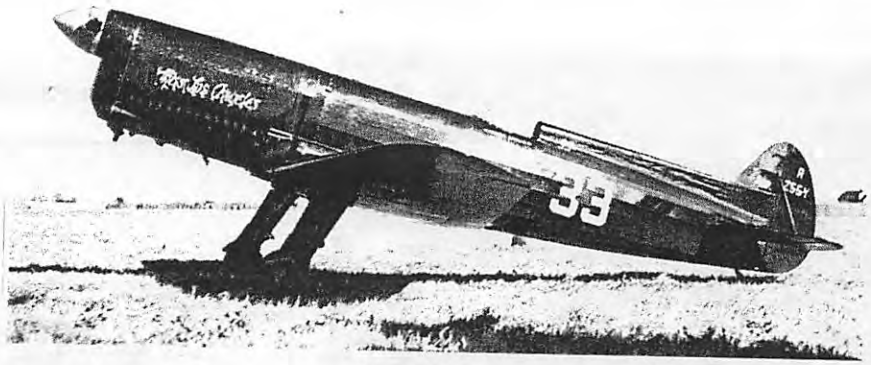
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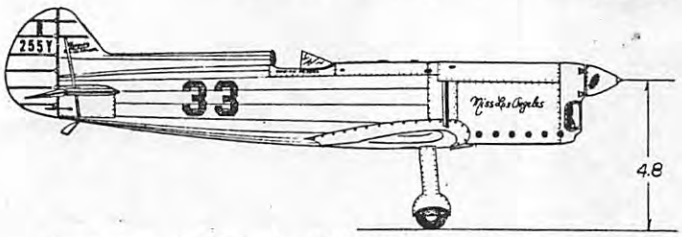
The Brown B-2 race

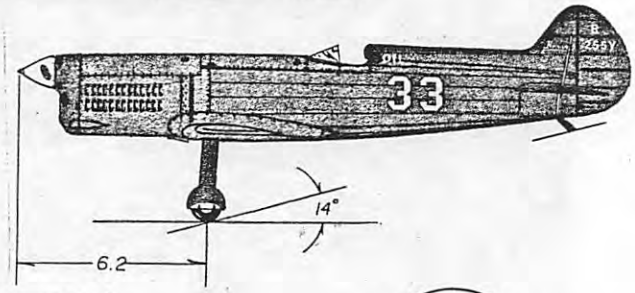
Courtesy Davi

BARE ALUMINUM

OPTIONAL Miss

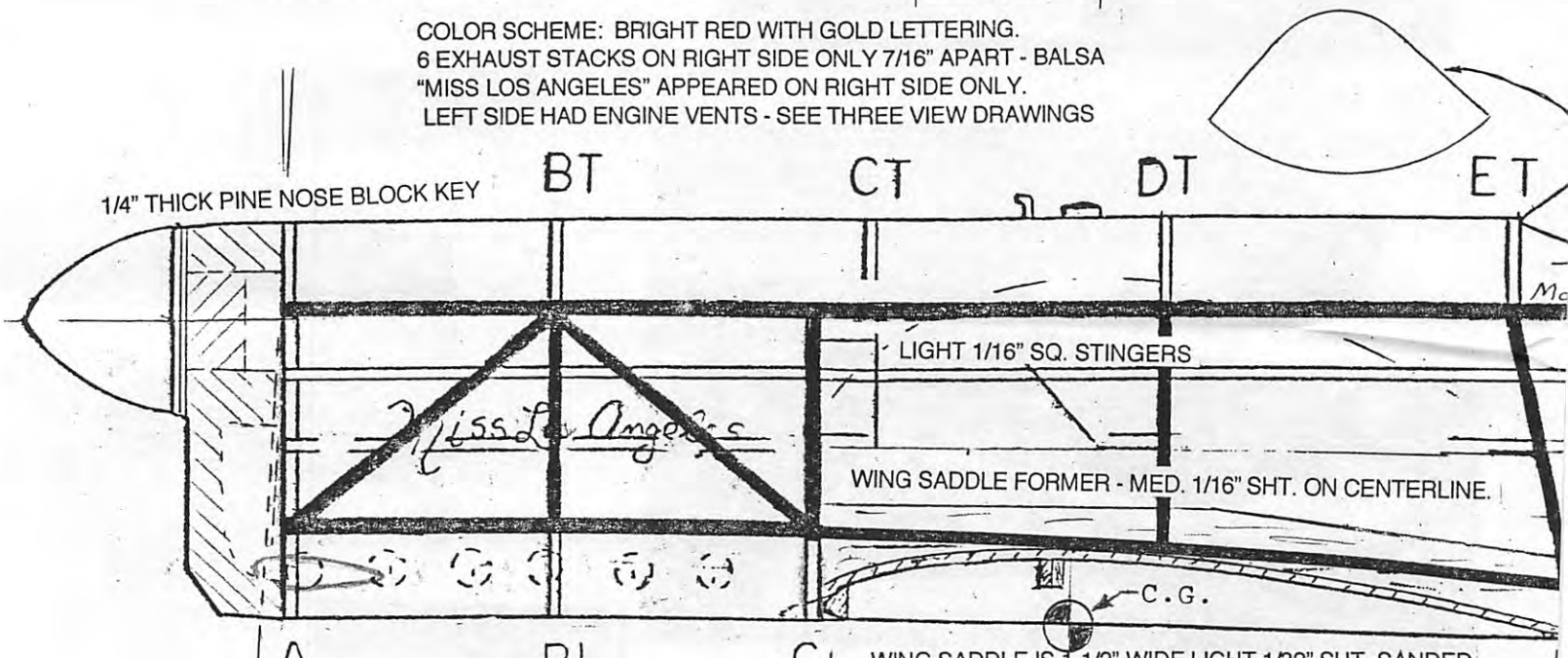




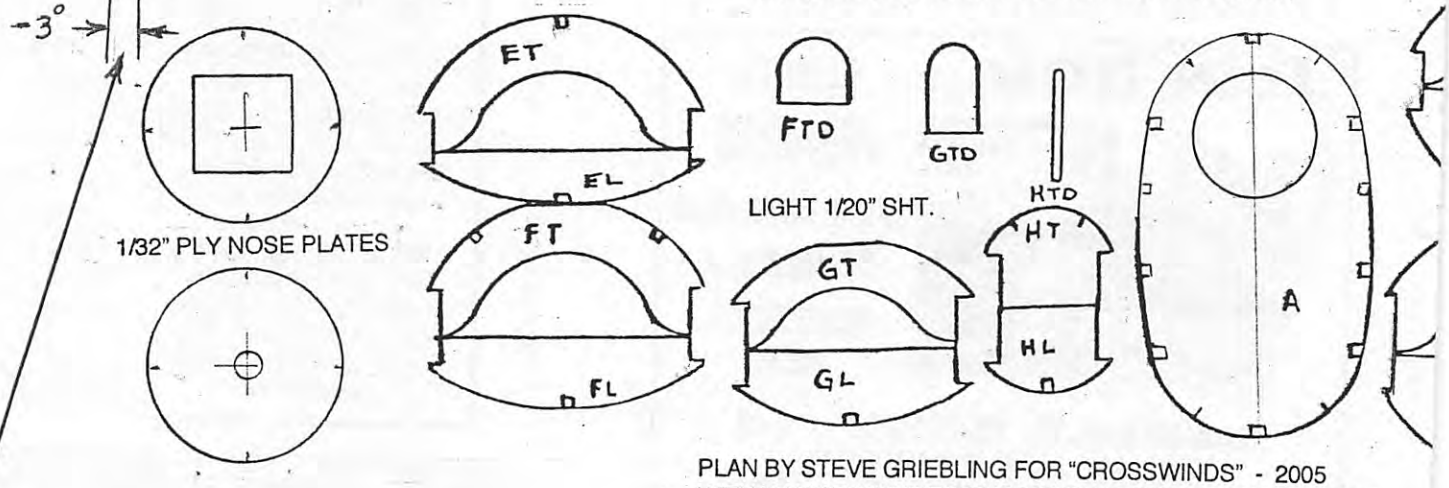


Courtesy Robert S. Hirsch RACEPLANES

COLOR SCHEME: BRIGHT RED WITH GOLD LETTERING.
6 EXHAUST STACKS ON RIGHT SIDE ONLY 7/16" APART - BALSA
"MISS LOS ANGELES" APPEARED ON RIGHT SIDE ONLY.
LEFT SIDE HAD ENGINE VENTS - SEE THREE VIEW DRAWINGS

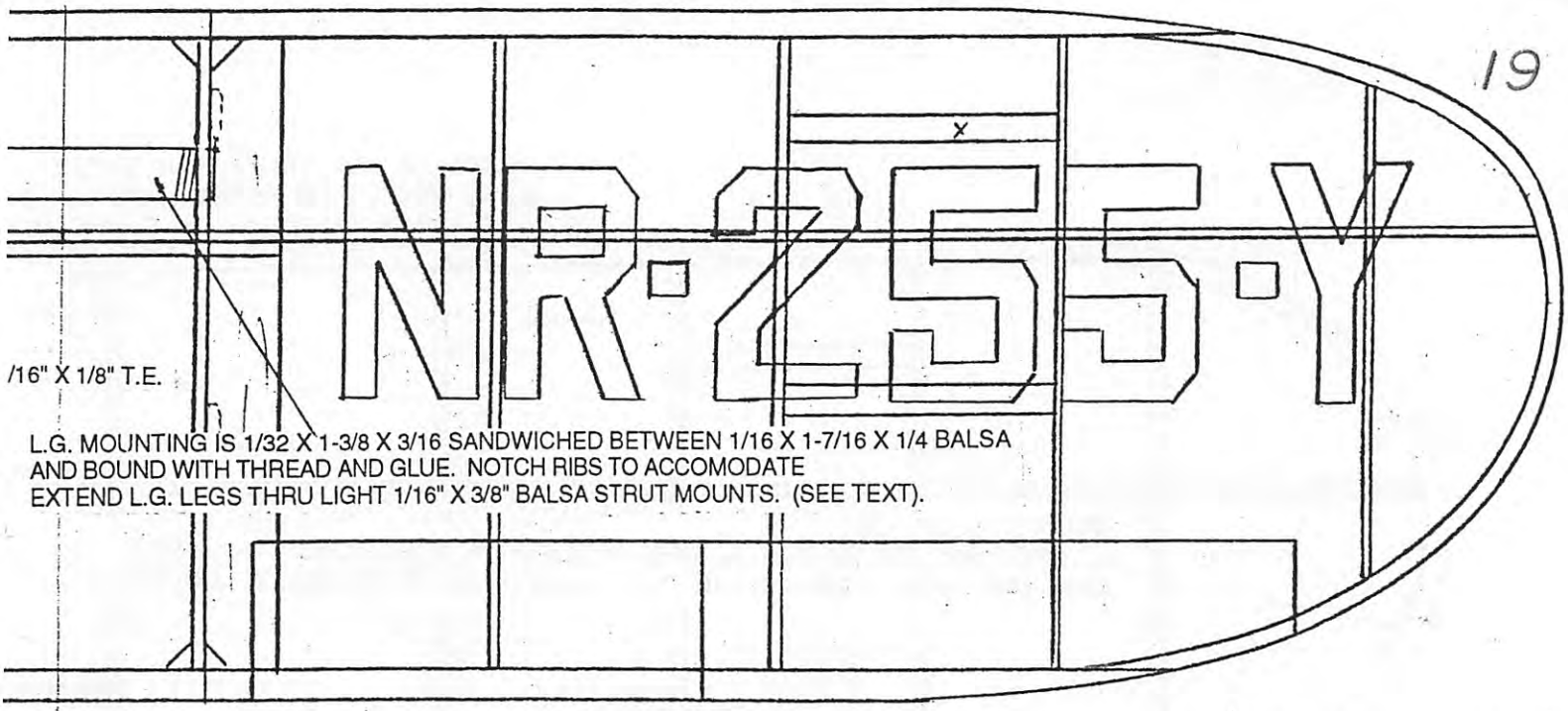


WING SADDLE IS 1-1/2" WIDE, LIGHT 1/32" SHT. SANDED TO FUSLEAGE CONTOUR AFTER IT'S IN POSITION



SAND 3 DEGREES DOWN THRUST AND
2 DEGREES RIGHT INTO NOSE BLOCK

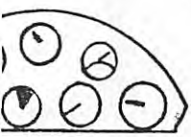
PLAN BY STEVE GRIEBLING FOR "CROSSWINDS" - 2005
WITH MANY THANKS TO RUSS BROWN AND RICH WEBER FOR
SUPPORTING DOCUMENTATION, DRAWINGS AND PHOTOS

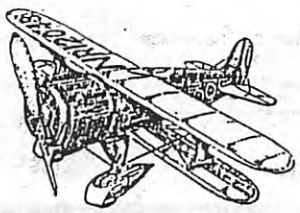


/16" X 1/8" T.E.

L.G. MOUNTING IS 1/32 X 1-3/8 X 3/16 SANDWICHED BETWEEN 1/16 X 1-7/16 X 1/4 BALSA AND BOUND WITH THREAD AND GLUE. NOTCH RIBS TO ACCOMODATE
EXTEND L.G. LEGS THRU LIGHT 1/16" X 3/8" BALSA STRUT MOUNTS. (SEE TEXT).

3 LAMS OF MED. HARD 1/32" X 1/8" BALSA; SAND TO BLEND TO TRAILING EDGE AND LEADING EDGE.





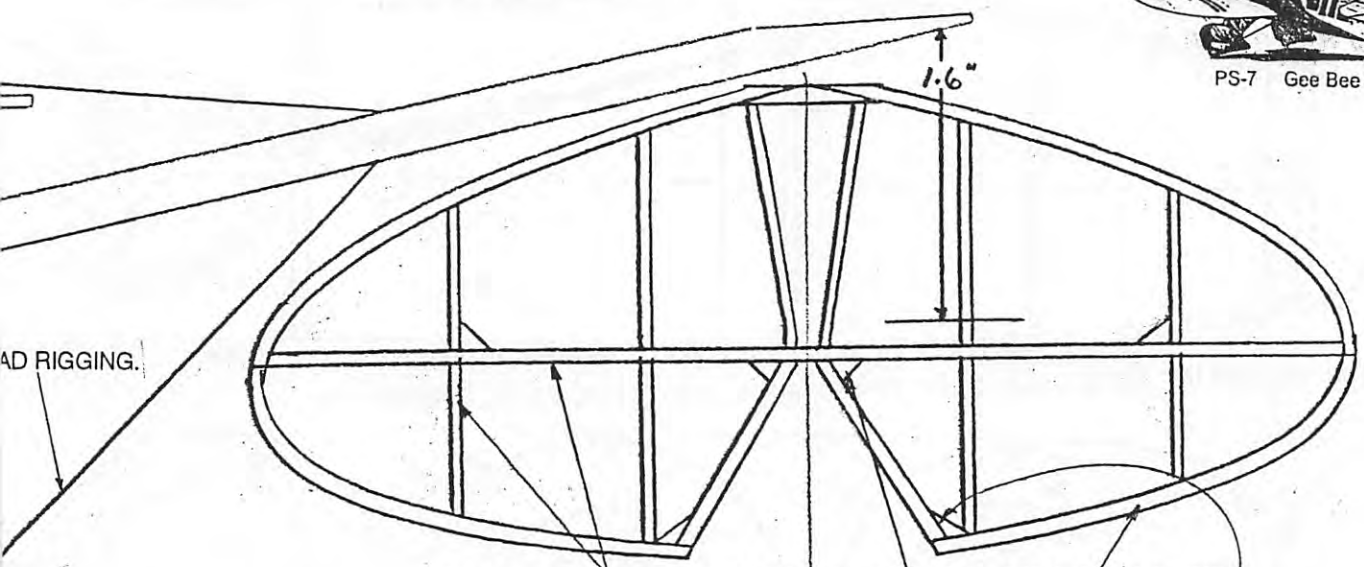
PS-21 Laird Super Solution



* R-70
Seversky P-35

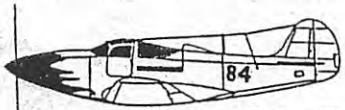


PS-7 Gee Bee R1



AD RIGGING.

LIGHT 1/16" X 3/32" RIBS AND SPAR TWO LAMS 1/32" X 1/16" OUTLINE.
SAND STABILIZER TO AIRFOIL SHAPE 3/32"FILLETS 1/16" FILLETS



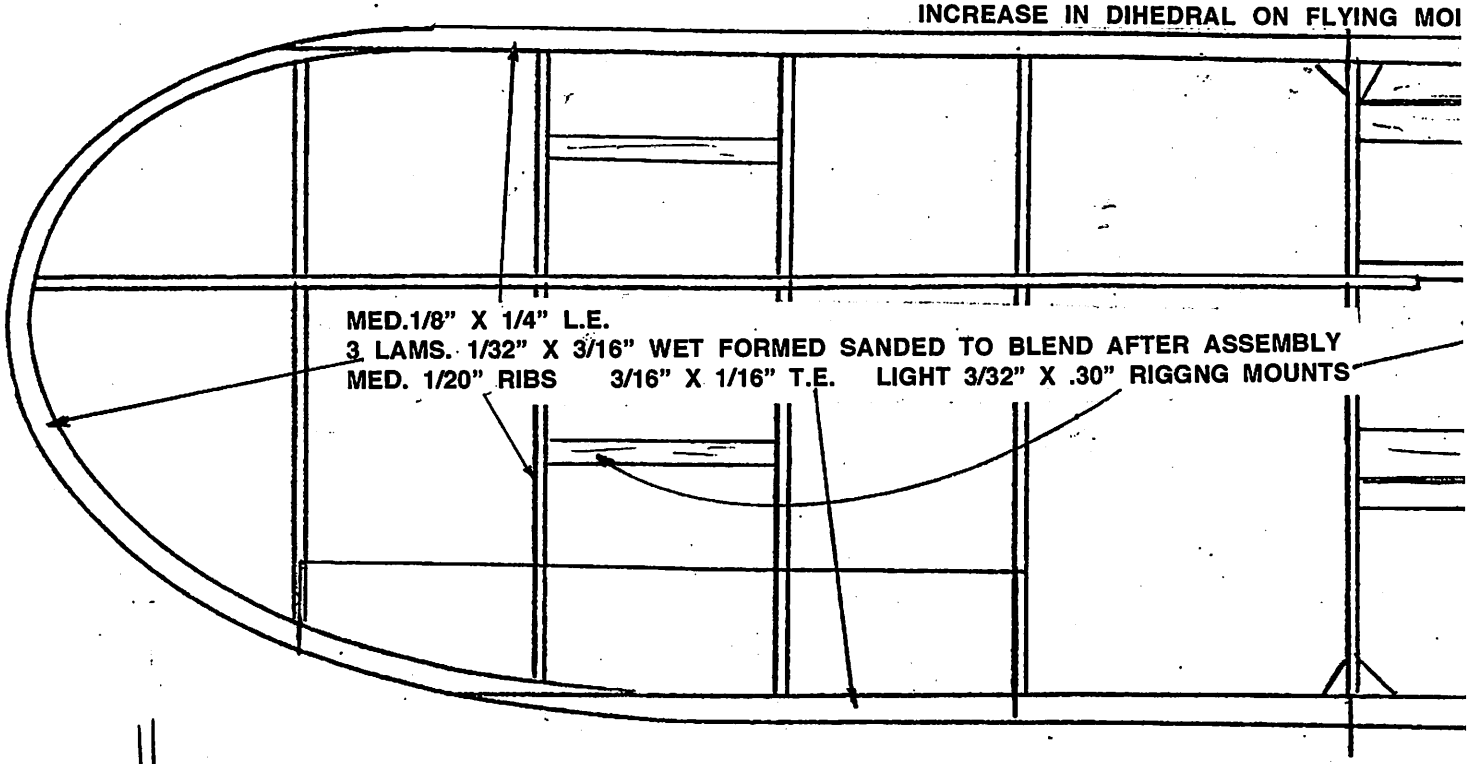
PS-17 P-39 Aircobra "Cobra II"

16" BROWN B - 2 RACER "MISS LOS ANGELES" FLOWN IN 1934 TO 1939 AIR RACES

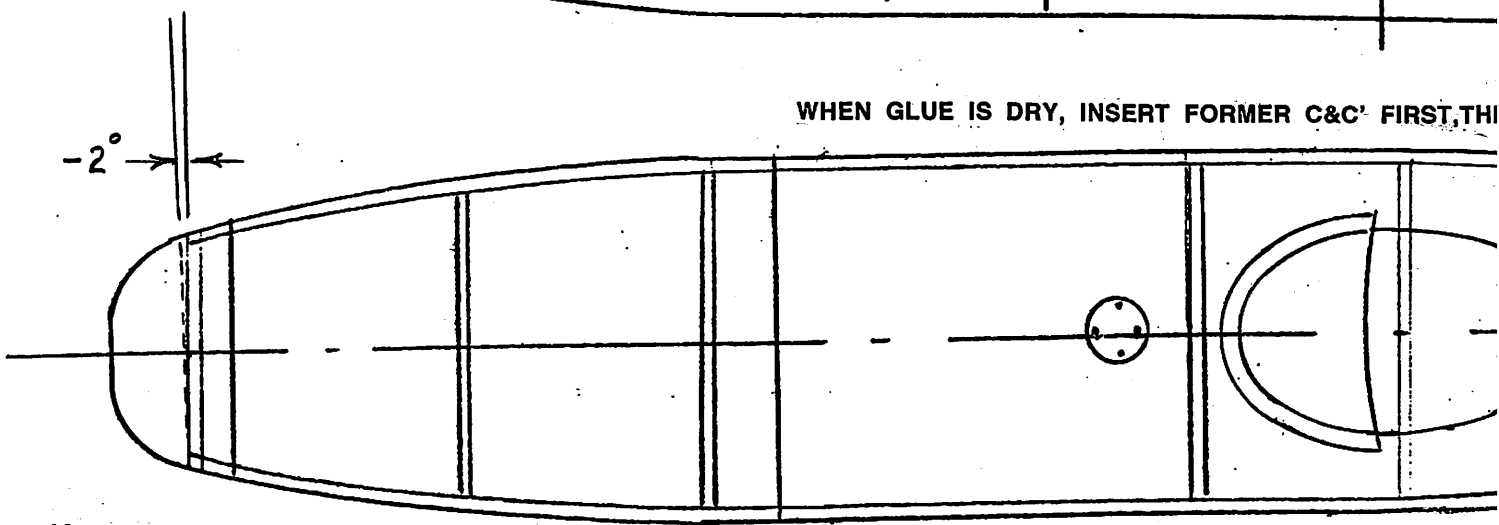
A TRIBUTE TO TWO OUTSTANDING BROWNS - RUSS AND THE AIRPLANE!

MODEL DESIGN BY STEVE GRIEBLING FOR CROSSWINDS 2005

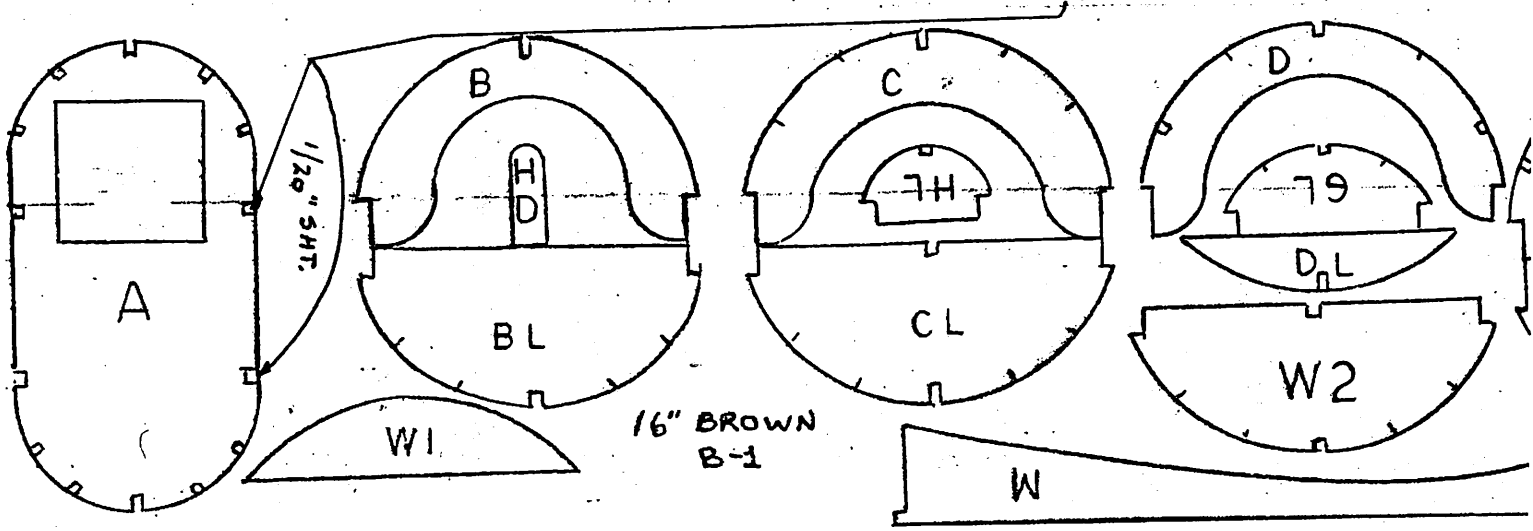
RIGGING IS SILK THREAD OR 'LYCRA' FI
NOTE: RIGGING ON FLYING MODEL IS TC
INCREASE IN DIHEDRAL ON FLYING MOI



WHEN GLUE IS DRY, INSERT FORMER C&C' FIRST,THI



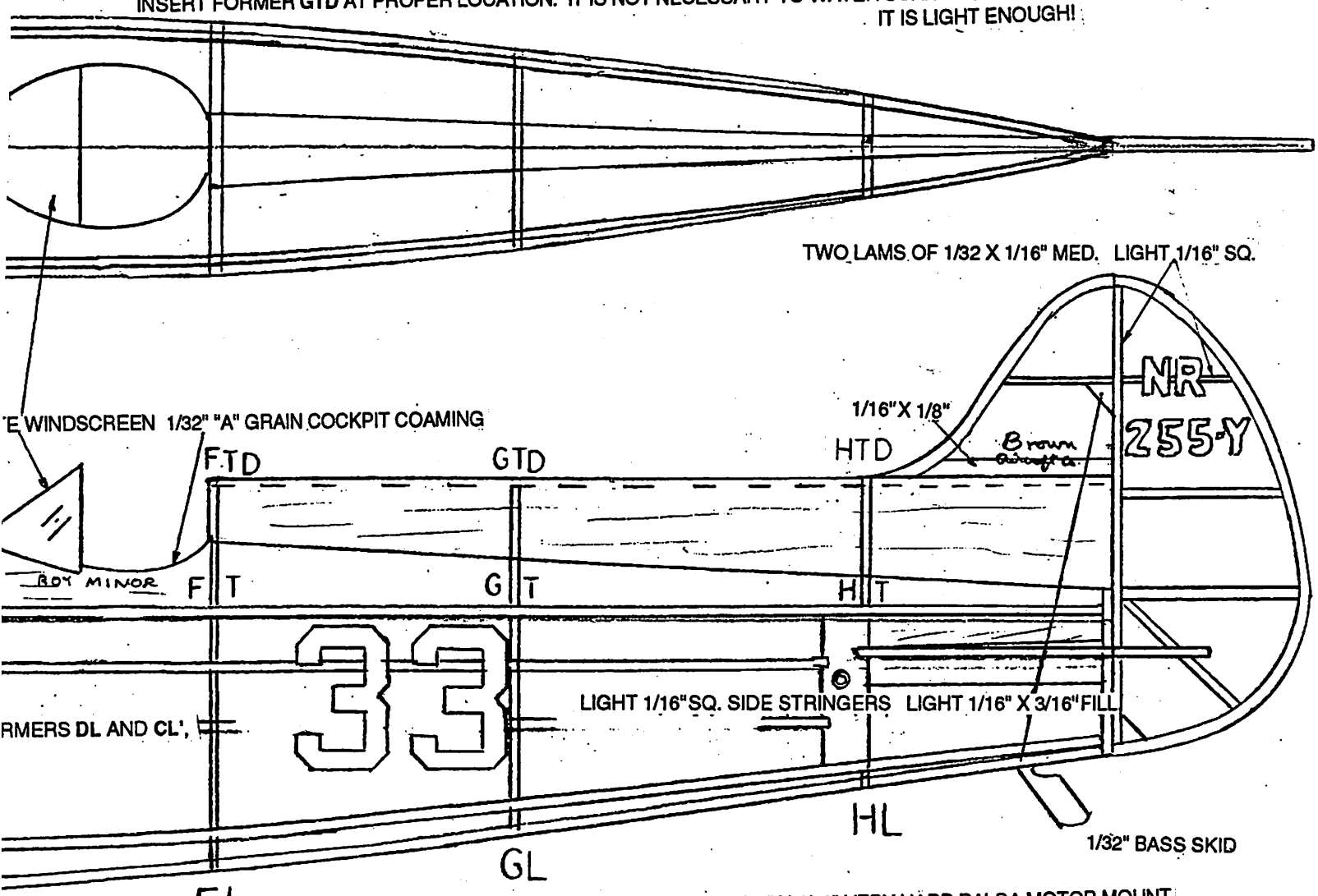
JOIN SIDE FRAMES AT REAR THEN GLUE FRONT ENDS INTO NOTCHES IN FORMER 'A'.



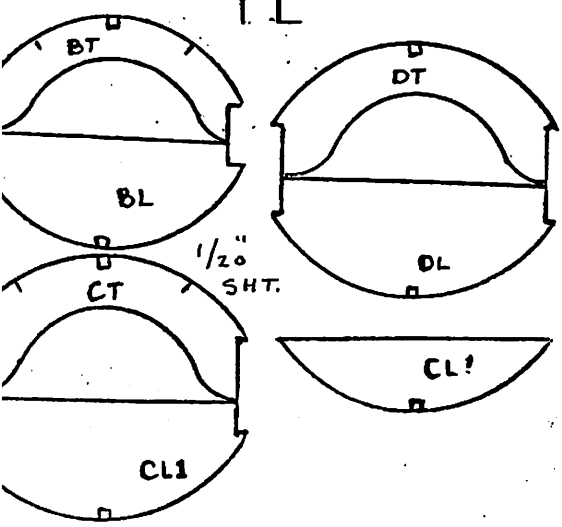
s	W/S	PVHC
.....	13"	15.95
.....	13"	15.95
.....	13"	18.50
.....	13"	15.95
" ...	13"	15.95
.....	18"	23.95

PATTERN FOR TURTLE DECK. LIGHT "A" GRAIN 1/32" SHEET

PINCH REAR END TOGETHER AND GLUE. INSERT FORMER **FTD** IN FRONT END AND GLUE THEN INSERT FORMER **GTD** AT PROPER LOCATION. IT IS NOT NECESSARY TO WATER SOAK THE BALSA IF IT IS LIGHT ENOUGH!



1/32" X 5/16" BASS OR 1/16" X 5/16" VERY HARD BALSA MOTOR MOUNT NOTCHED FOR SIDE STRINGERS AND STABILIZER. FRAME. MAKE IT FLUSH TO OUTSIDE SURFACE OF BOX



16" BROWN B - 2 RACER "MISS LOS ANGELES" FLOWN IN 1934 TO 1939 AIR RACES

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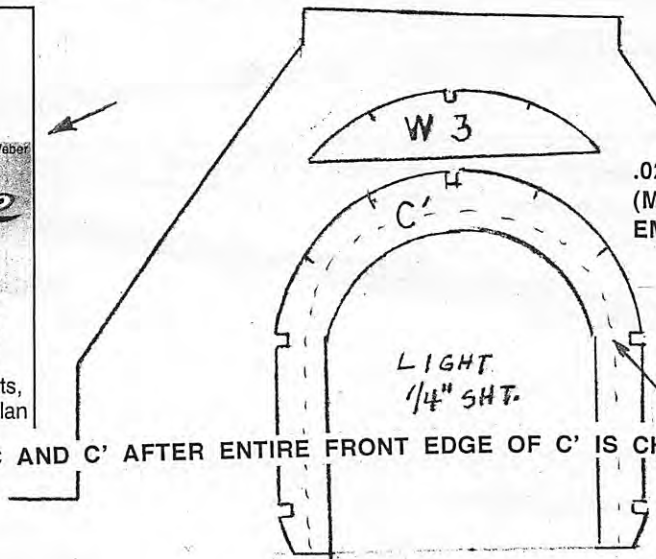
FRONT

7" DIA.
"BOTTLE PROP"WITH BLADES FLARED FORWARD IS RECOMMENDED.
(REAR OF PROP MUST BE STRAIGNT TO CLEAR NOSE BLOCK).

easy built models
Since 1932



FF95LC
Mystery Tailless
laser cut parts,
CAD drawn plan

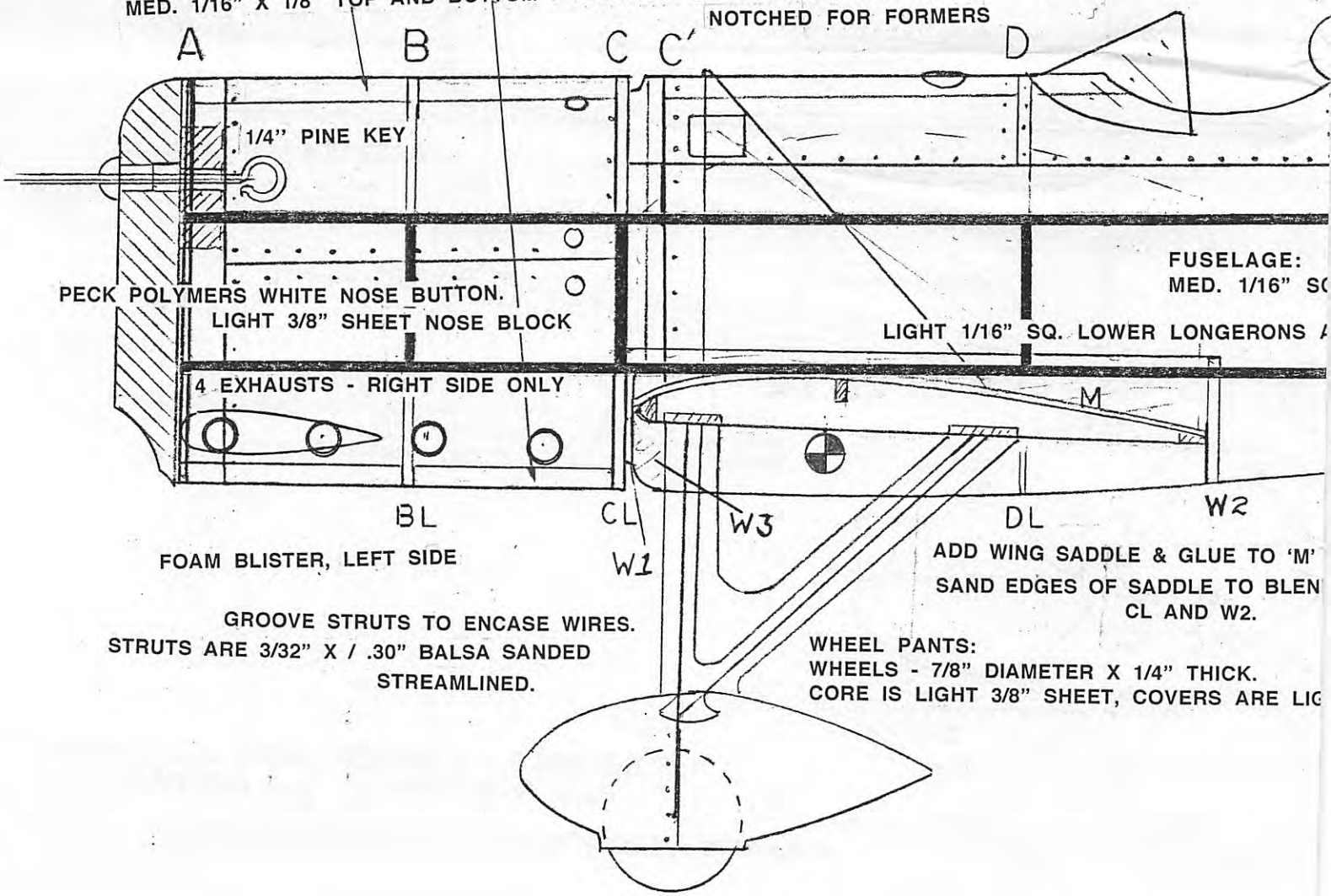


.020 MUSIC WIRE ARMATURE
(MAKE A FIXTURE TO ALIGN
EMBED WIRES INTO SLOT CUT

PRE-ASSEMBLE C AND C' AFTER ENTIRE FRONT EDGE OF C' IS CHAMFERED.

.020 ACETATE WINDSHIELD

MED. 1/16" X 1/8" TOP AND BOTTOM FORWARD CENTER STRINGERS
NOTCHED FOR FORMERS



FUSELAGE:
MED. 1/16" SQ

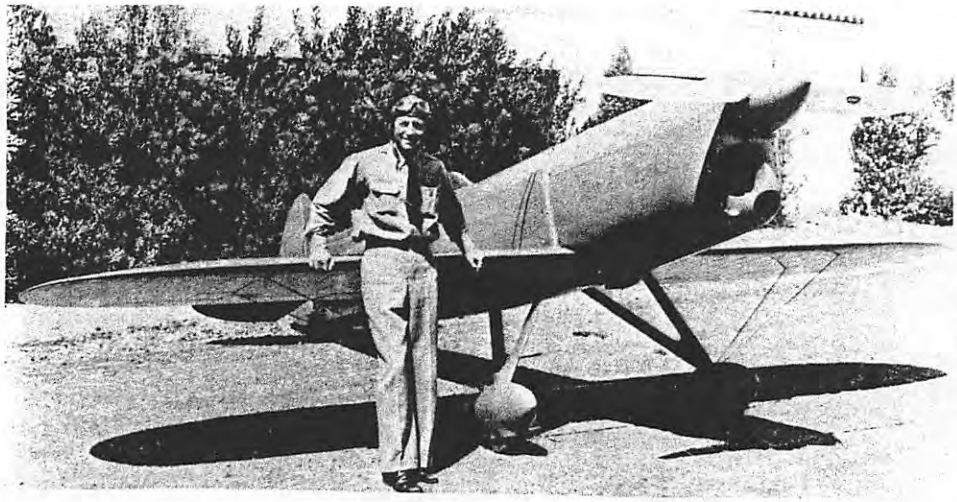
LIGHT 1/16" SQ. LOWER LONGERONS

FOAM BLISTER, LEFT SIDE

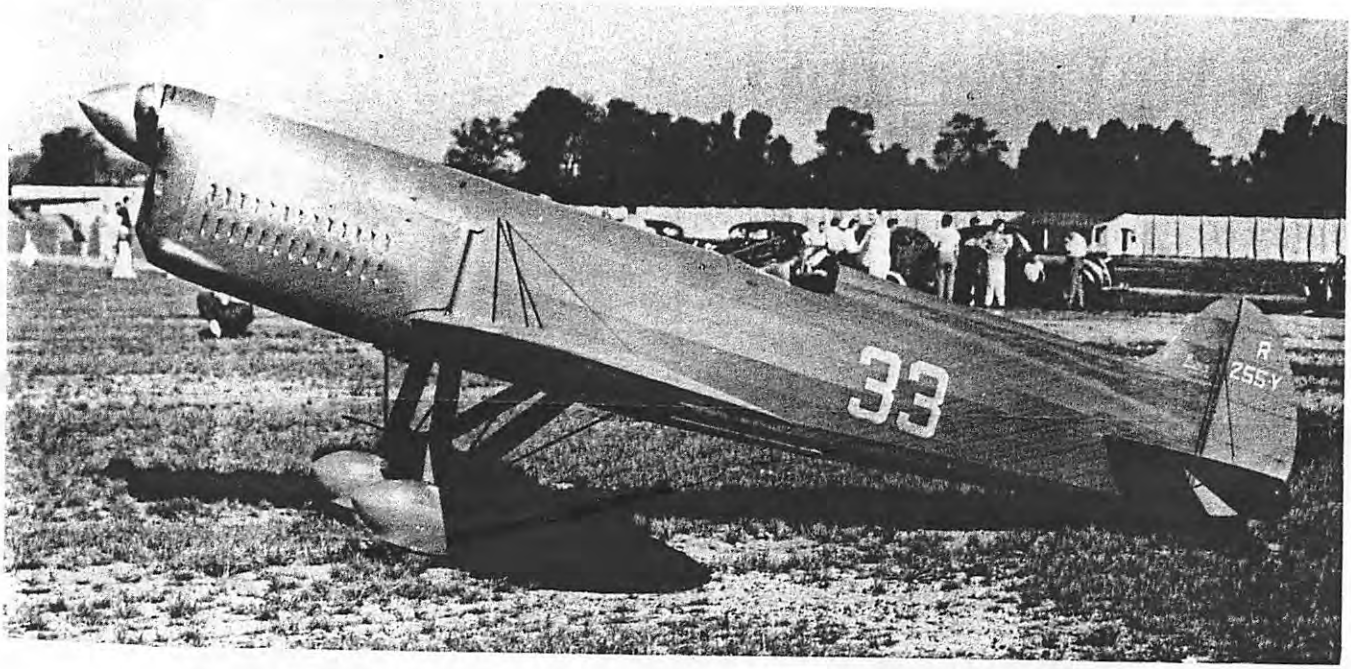
ADD WING SADDLE & GLUE TO 'M'
SAND EDGES OF SADDLE TO BLEN
CL AND W2.

GROOVE STRUTS TO ENCASE WIRES.
STRUTS ARE 3/32" X / .30" BALSA SANDED
STREAMLINED.

WHEEL PANTS:
WHEELS - 7/8" DIAMETER X 1/4" THICK.
CORE IS LIGHT 3/8" SHEET, COVERS ARE LIG



"Miss Los Angeles" was built in 1934 and was flown by Roy Minor. His fastest pylon speed that year was 214.92 mph. Photo below shows the "old reliable" Brown B-2 at Cleveland in 1937 with Marion McKeen doing the piloting. His speed in one race was 223.64 mph.





Ralph Bushey and the canary yellow Brown B-1. Powered by a 185 hp four cylinder Menasco, Bushey barely escaped with his life when the engine mount fittings in the B-1 snapped losing engine cowl and all. Amazingly, he rode the aircraft back to the ground.

CFFS CONTEST EVENTS AT LORAIN COMMUNITY COLLEGE ATHLETIC FIELD

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

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

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

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Dates for CFFS Winter activities: Holiday Dinner: Nov 5 at HARRY'S STEAK HOUSE. "Third Thursday of the Month" meetings will continue to be held at Dimitri's with the exception of Dec. 15.

Pre- Indoor Contest at Kent State Univ. Field House - April 22, 2006.

NOTE: "FALLS HOBBY SHOP" (A NEW SHOP) OPENED RECENTLY. IT IS LOCATED AT THE CORNER OF PORTAGE TRAIL AND 12TH ST. IN CUYAHOGA FALLS, OH.

March 25-26 '06 Midwest States Indoor at Evansville, IL "Bob and Sue Warmann <bandswarmann @ mynex.net>

Flash from the CFFS banquet: The winner of the 1st prize Waco Mug as top gun of feature contest events is Waco guru Del Balunek.