

**Western New York
Free Flight Society**
and the
YANKEE AIR PIRATES
are pleased to announce the
PIRATE CHALLENGE
2020



Part of the
National Warplane Museum Series
of
Outdoor Free Flight Contests

In cooperation with



Location: National Warplane Museum
Home of *The Greatest Show on Turf*
Geneseo, NY

Friday, August 21

Flying 9:30 AM to 4 PM

- FAC Combined Race Planes
- FAC Two Bit Plus One
- FAC Old Time Rubber Fuselage
- FAC Simplified Scale
- FAC Jimmy Allen
- FAC Blue Ridge Special
- FAC Modern Military **MASS LAUNCH**
- FAC Embryo for Juniors

Saturday, August 22

Flying 9:30 AM to 4 PM

- FAC WW I Mass Launch
- FAC Rubber Scale
- FAC Power Scale
- FAC Golden Age Multi-wing
- FAC No-Cal Profile
- FAC Phantom Flash
- FAC Embryo
- FAC Blue Ridge Special for Juniors

Sunday, August 23

Flying 9:30 AM to 4 PM

- FAC Modern Civil
- FAC Dime Scale
- FAC Golden Age Single Wing
- FAC Jet Cat Glider
- FAC WW II Mass Launch
- Fly What You Built **Mass Launch** for Juniors



**OUR SCALE JUDGE AND
BOM COMPLIANCE
CHECKER: A ONE EYED
MONKEY WITH AN
ATTITUDE**

NOW HEAR THIS:

Flying times posted for the events are subject to change based on weather conditions. If the weather is good we can extend the flying (on either end) or if weather is bad, flying time may be shortened. Stay in touch with CD Mark Rzdaca (wnyffs@rochester.rr.com)

In addition to flexibility regarding flying time, the events flown are flexible as well. If sufficient flyers make official flights to warrant a Kanone, the event will be included in the report.

Entrance & Registration Fee: \$10 for contest & casual flyers. Juniors fly free. ALL contest & casual flyers must register

Proof of AMA or MAAC membership (incl. juniors) required. National Warplane Museum membership encouraged.

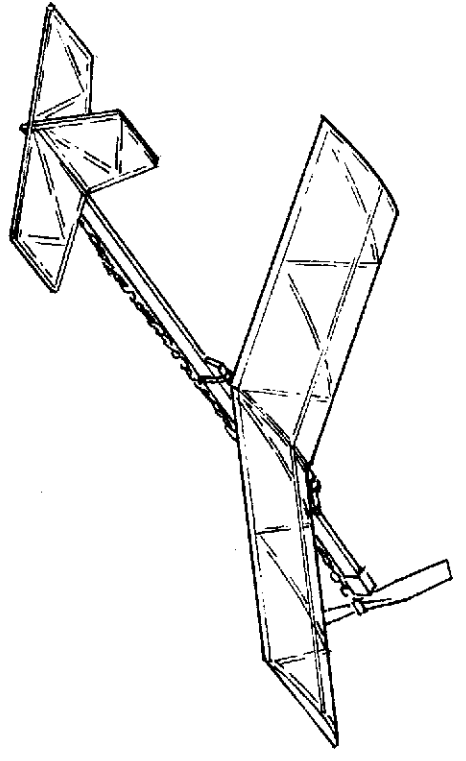
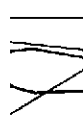
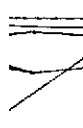
All events will be flown to the current FAC Rules.

- Scale judging scores from previous Nats/Non Nats events will be used; contestants are strongly encouraged to bring official results to reduce judging work load.
- Both Judged Scale events will be flown BEST of three flights.
- Merchandise prizes will be awarded to First Place Winners in both Dime Scale events.
- Many Half Wake models can be flown in Old Time Rubber Fuselage. If there are enough modelers able and willing, we will fly Half Wake. Bring your models and let the CD know you would like to fly.

READ THE FINE PRINT HERE

February 5, 2020 Release 01

**Awards to
Third Place**
for all events
listed here



INSTRUCTIONS FOR THE "BLUE RIDGE SPECIAL"

BEFORE BEGINNING TO BUILD, read the instructions carefully and study the plan. Identify each piece of wood by its dimensions and be sure you know where it goes. Contact us if any parts are missing. You will need the following tools and materials to complete the model:

1. A flat building board at least 13"x19" in which you can stick pins.
2. Plastic kitchen wrap and masking tape.
3. About 50 straight pins, 3 or 4 new single edge razor blades, and 2 or 3 sandpaper emery boards or a small block of wood with a piece of fine 220 grit sandpaper glued to it. *Teethpicks*
4. 2 or 3 Q-tips or a small soft-bristle artist's brush.
5. A small spray can of one of the following: Clear artist's glaze, artist's fixative, or clear model aircraft dope. One of these may be obtained where art supplies are sold or at a hobby shop.
6. Elmer's Carpenter's Wood Glue or Franklin Titbond (both are nontoxic, water soluble and available at most hardware stores). These are stronger than most white glues and take less time to dry.

THE BLUE RIDGE SPECIAL

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BUILDING.

1. Tape the plan to the building board and tape a piece of plastic wrap over it. This will keep the glue from sticking to the plan. Make sure everything is **wrinkle free**.
2. **Begin with the wing, one panel at a time.**
 - a. Pin the leading and trailing edges to the plan. Straddle the pieces with pins as shown. **Do not** stick pins through the wood as this will weaken it. Dots on the plan indicate suggested pin positions.
 - b. Glue each end rib and dihedral rib in place. Trim any excess rib length from the rear (small end). Use the dihedral gauge to install the two dihedral ribs at the correct angle. Use pins as necessary.

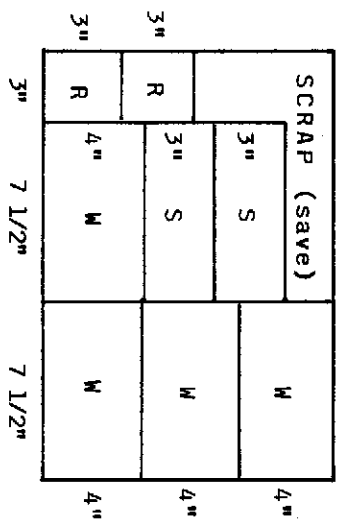
Apply the glue sparingly with a toothpick. Lots of glue makes a heavy model that won't fly well, and it won't be any stronger.

- c. Carefully trim and fit each diagonal rib as shown on the plan. Use pins as necessary.
 - d. Add the 1/16" square spar. It is necessary to trim the notch on each diagonal rib as shown. The fit should be snug but not forced.
- Allow the glue to dry thoroughly before removing the panel from the plan.**

3. Build the other wing panel and the stabilizer and rudder in a similar manner.
4. At this point it doesn't hurt to go over each joint with a little extra glue. Wipe it on with a toothpick.
5. Sand each piece gently and carefully, giving particular attention to rough joints, and to rounding the leading edge and tapering the trailing edge of the wing as shown on the plan. It is this step that separates the **beginners from the experts. Do neat work!**
6. Join the wing panels as shown on the plan before covering.

COVERING.

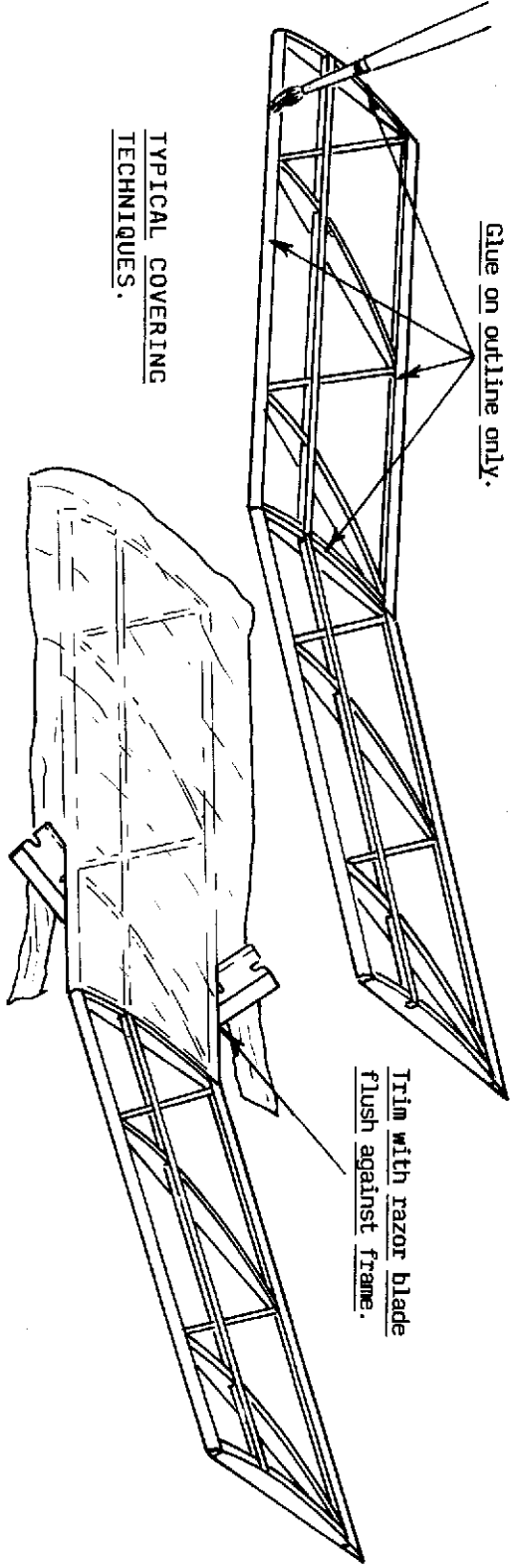
1. Cut the 12"x18" piece of tissue provided into pieces as indicated at the right. W stands for wing, S for stabilizer and R for rudder.
2. Mix a tablespoon of glue with an equal part of water in a small cup or jar lid. With a q-tip or small brush, coat the outline of one side of the rudder with the mixture. **DO NOT** coat the diagonal strips. The outline should be wet but not sloppy.



3. Lay the piece of tissue designated for the rudder over the coated side. Pull out any wrinkles. At this point, the covering should be smooth and wrinkle free. But don't attempt to pull it "drum tight" or you will add wrinkles. Set the rudder aside until the glue mixture dries.
4. Use a new razor blade to trim away the excess tissue from the rudder. Then cover the other side and cover the stabilizer in a similar manner. Again, don't coat the diagonal pieces of the stabilizer, only the outline and the 1/16"x1/8" center piece. Don't forget to trim one side before covering the other.
5. Cover the top of the wing first, one panel at a time. Apply the glue mixture only to the outline of the panel you are covering, i.e., the tip rib, center rib, and leading and trailing edges. Trim away the excess tissue when the glue mixture is dry. Overlap the tissue on the center ribs when covering the second panel. Cover the bottom of the wing similarly.

Glue on outline only.

Trim with razor blade flush against frame.



TYPICAL COVERING TECHNIQUES.

FINAL CONSTRUCTION STEPS.

1. Glue the stabilizer to the motor stick and the rudder to the stabilizer. Be sure to offset the rudder as shown on the plan, for turning flight.
2. Assemble the wing mount as shown on the plan and glue it to the wing. Do not glue the wing mount to the motor stick (basic flight adjustments are made by sliding the wing forward or back). Align as shown.
3. Add the rear motor hook. Glue and bind it in place with thread for safety.
4. Give the entire model one or two light coats of the fixative spray or clear dope, and allow it to dry thoroughly. This will tighten the tissue and increase its durability. If any sagging tissue or stubborn wrinkles remain, wet these with water to further shrink the tissue. Small wrinkles have no adverse effect on the flight.
5. Check the entire model for warps. Each panel of the wing, the stabilizer, and the rudder should be flat and with no warps or twists. If you find a warp, hold the warped part briefly near a source of low heat, not an open flame, while gently twisting in the opposite direction of the warp. It may be necessary to repeat this to remove a stubborn warp.

FLYING INSTRUCTIONS.

TAKE YOUR TIME. YOU'VE PUT IN A LOT OF EFFORT SO FAR. MAKE YOUR TEST AND ADJUSTMENT FLIGHTS WHEN THERE IS LITTLE OR NO WIND. CHOOSE A FIELD FREE OF TREES AT LEAST THE SIZE OF A SOFTBALL OR SOCCER FIELD. ONCE IT IS ADJUSTED THE "SPECIAL" CAN BE FLOWN IN UP TO TEN MPH WIND, BUT YOU WILL NEED MORE ROOM TO FLY IT THEN, AND SHOULD BE PREPARED TO CHASE IT. AVOID WET GRASS AND RAIN. Use the guide below to adjust the model.

PREPARING THE MOTOR. Use a 28" length of 1/8" rubber. Wet the ends of the strip with saliva, and tie it into a loop about 13" long with a square knot. Pull the ends tight (saliva keeps the rubber from chafing or being nicked when the knot is tied). This length of motor will allow some slack so that the propeller clutch can disengage and the propeller can "freewheel" when the motor is unwound (thus producing less drag and a longer flight). Wet the motor with 2-3 drops of a mild liquid soap before winding and after every few flights to give it a longer life. Rub it in well. It should be wet but not sloppy. Install the propeller and motor. Place the knot at the rear motor hook. (Otherwise the motor won't unwind properly.)

THE INITIAL WING POSITION should be approximately as shown on the plan.

TEST FLIGHTS. Make the first few flights with about 150 to 200 turns on the motor. Count them, don't guess! Launch the model with a gentle shove and the nose held slightly high. The model should climb gradually to the right in a 30' diameter circle, and float back to the ground with the propeller freewheeling. If everything looks o.k., increase the motor winds by about 50 turns per flight, making adjustments as necessary. Maximum "finger winds" (without stretch winding--see below) will be about 400-450.

In a perfect flight with the motor fully wound, the model should climb steeply to the right in a spiral about 30-50' in diameter, and float back down in a right circle (see the diagram at the left). If not, work through the following to correct any problems. **REMEMBER: LITTLE OR NO WIND** during testing!

GLIDE ADJUSTMENT. (Take care of glide problems first.)

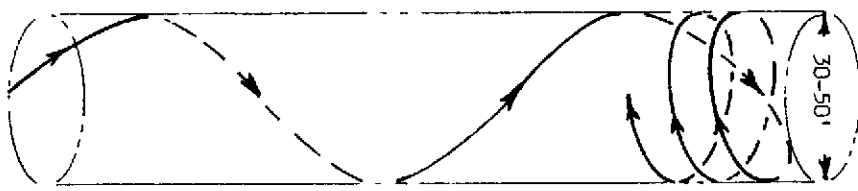
1. If the model stalls persistently (a), slide the wind back 1/8" at a time to correct this. If it dives (glides steep and fast) (b), slide the wing forward 1/8" at a time.

2. If the model circles too tightly to the right, breathe on the rudder while twisting its trailing edge to the left. This will remove the excess right turn. If the model glides straight or to the left, warp the rudder trailing edge to the right. Also check the motor stick to see if it is bent or bowed, and correct if necessary.

POWER ADJUSTMENT.

If any glide adjustments have been made since your last flight, test fly the model to see if any of the powered flight problems are still evident. They may have been corrected by the glide adjustments.

1. Refer to the diagram at the right.
 - a. If the model climbs or dives to the left or tries to fly straight, there is insufficient right thrust.
 - b. If the model chases its tail under power with little or no altitude gain, or dives in to the right, there is excessive right thrust.
 To adjust the right thrust, refer to the diagram below and GENTLY bend the white plastic propeller bearing to correct it.
2. If the model is not climbing:
 - a. Are you winding the motor enough? Use 450 or more turns for high flights.
 - b. Is the motor tired? Try a fresh one. Rubber gets "fatigued" after several flights.
 - c. Check for excessive down thrust. Refer to the diagram below. To correct, shim the motor stick nose to adjust and tighten the fit of the white plastic bearing. The fit should be tight not loose.

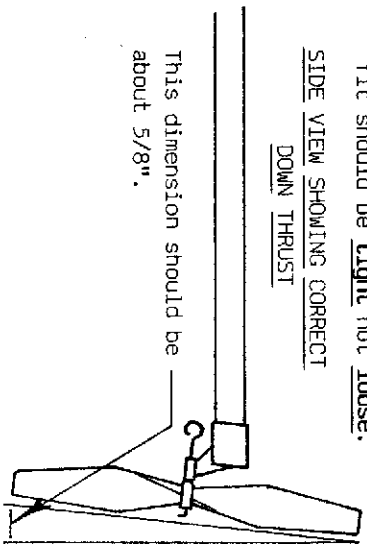


(a)

(b)

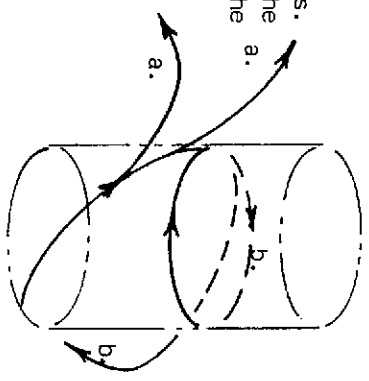
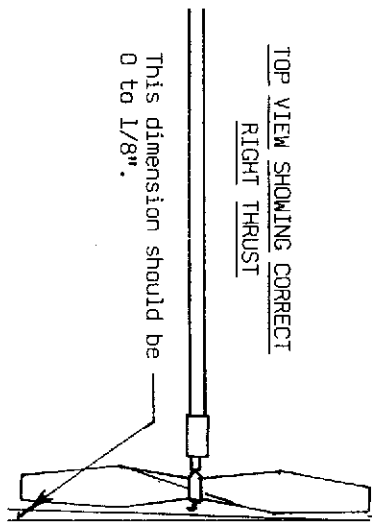
SIDE VIEW SHOWING CORRECT DOWN THRUST

This dimension should be about 5/8".

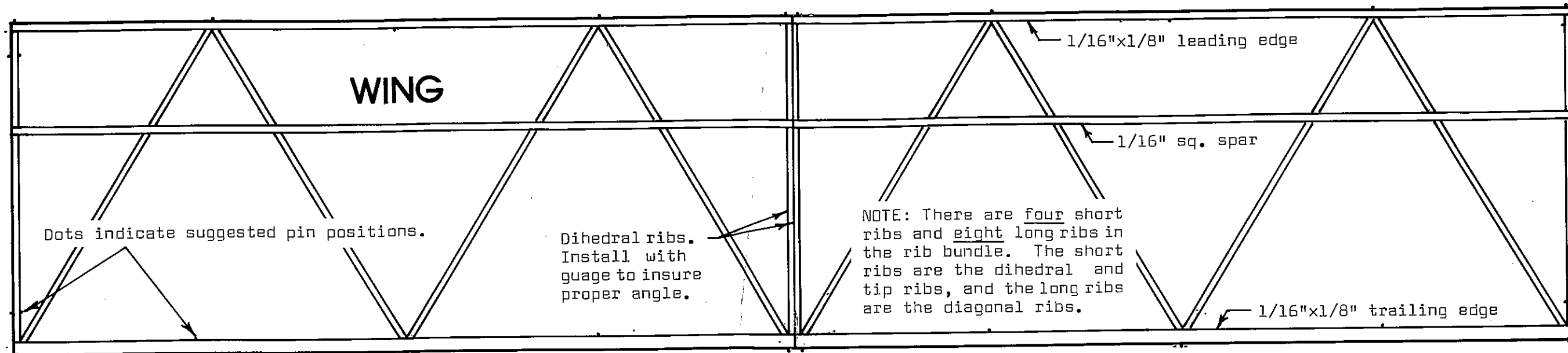
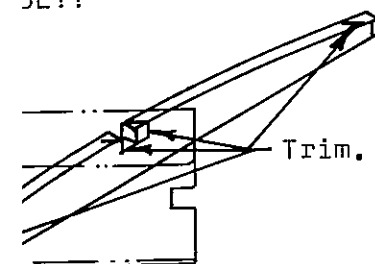


TOP VIEW SHOWING CORRECT RIGHT THRUST

This dimension should be 0 to 1/8".



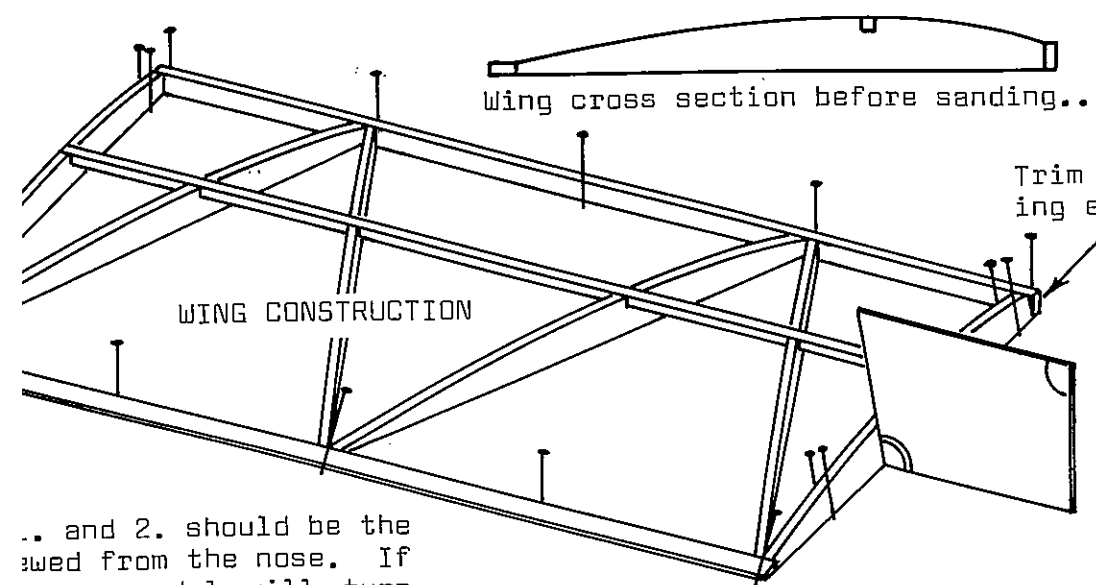
ly trim the leading trailing edge, and P each diagonal rib snugly. If ribs are 3, trim excess from <. USE A SHARP RA- DE!!



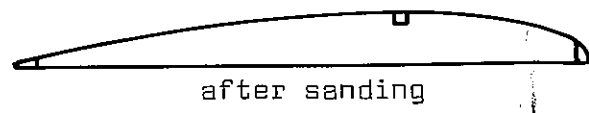
Dots indicate suggested pin positions.

Dihedral ribs. Install with guage to insure proper angle.

NOTE: There are four short ribs and eight long ribs in the rib bundle. The short ribs are the dihedral and tip ribs, and the long ribs are the diagonal ribs.

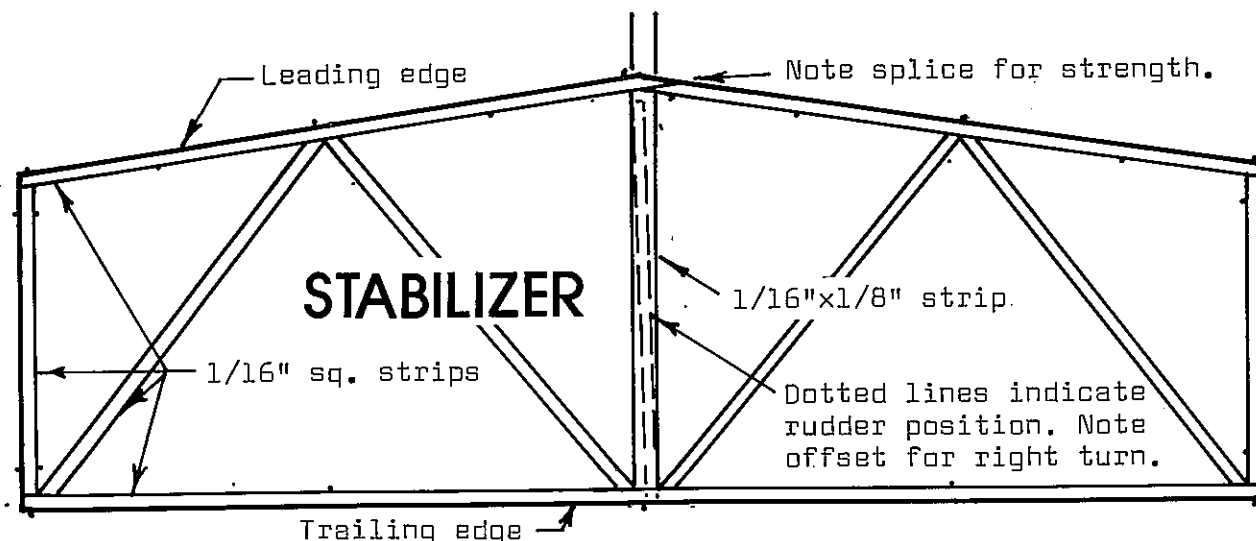


Wing cross section before sanding...



after sanding

Trim leading and trailing edge flush with rib.



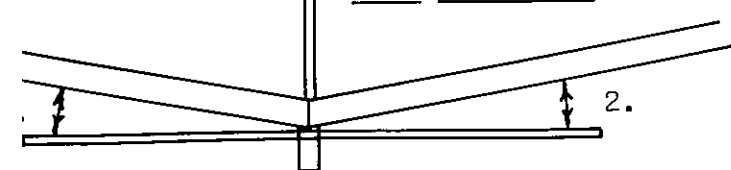
STABILIZER

Note splice for strength.

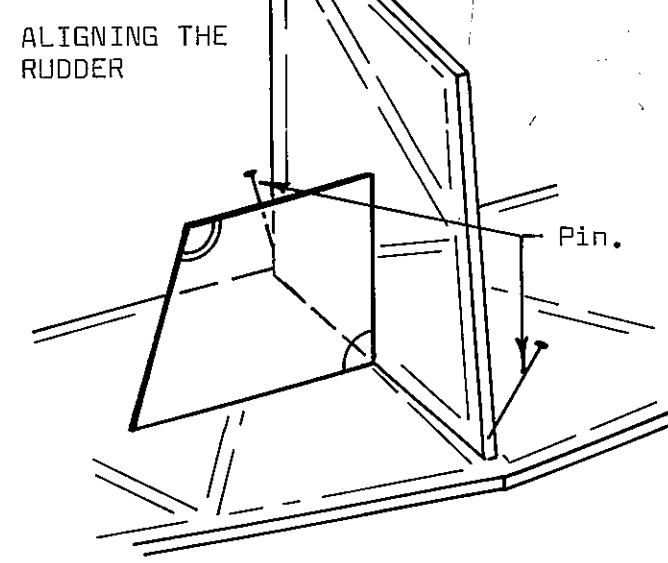
Dotted lines indicate rudder position. Note offset for right turn.

.. and 2. should be the viewed from the nose. If larger, model will turn left. If 2. is larger, model will turn right.

WING ALIGNMENT



Push prop hanger firmly on motor stick.

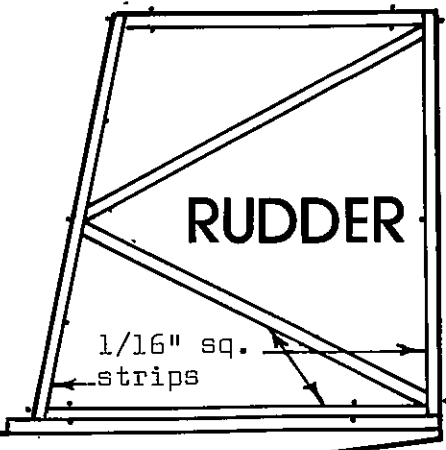


ALIGNING THE RUDDER

Pin.

RUDDER AND DIHEDRAL GUAGE.
Make from an index card or thin cardboard.

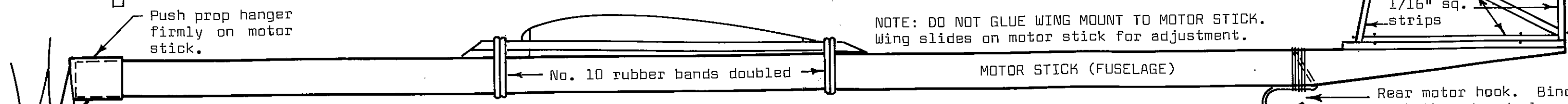
THE BLUE RIDGE SPECIAL
A HIGH FLYING RUBBER POWERED MODEL
BY BLUE RIDGE MODELS
ASHEVILLE, NORTH CAROLINA
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RUDDER

1/16" sq. strips

NOTE: DO NOT GLUE WING MOUNT TO MOTOR STICK. Wing slides on motor stick for adjustment.

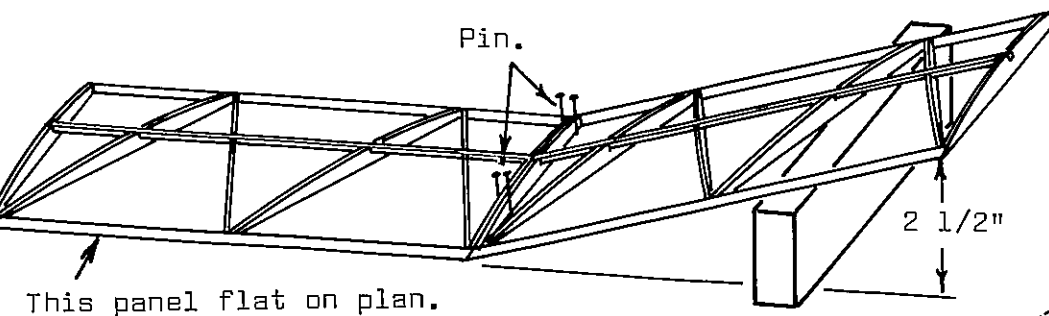


MOTOR STICK (FUSELAGE)

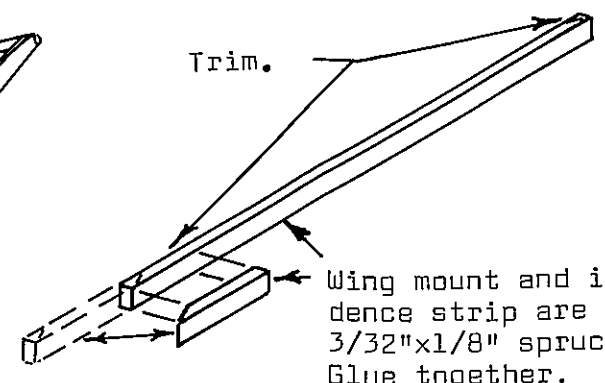
No. 10 rubber bands doubled

Rear motor hook. Bind with thread and glue.

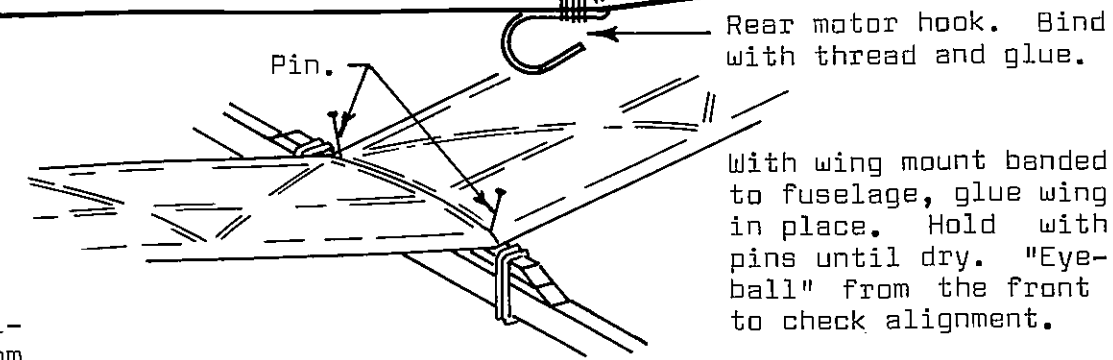
pick up one wing panel 1/2" and glue panels together for dihedral before covering.



This panel flat on plan.



Wing mount and incidence strip are from 3/32"x1/8" spruce. Glue together.



Glue stabilizer and rudder to motor stick first.

With wing mount banded to fuselage, glue wing in place. Hold with pins until dry. "Eyeball" from the front to check alignment.

