



AS AN
"EXECUTIVE 4 PLACE"

SKY TIGER

Instructions



AS A "HOME-BUILT"

The Sky Tiger is really easy to fly, as low-wing models go, and an excellent choice for any modeler who is comfortable flying high-wing trainers. However, be sure you are ready for the extra challenge and performance, or get some help from an experienced R/C flight instructor. With a .40 size engine, the Sky Tiger moves through the air gracefully, right where you want it, sure-footed and responsive. With a .61, you unleash it for speed, leaping vertical climbs, and cat-like maneuverability. Throttled back, it glides in for a smooth approach with good roll control even at slow speeds.

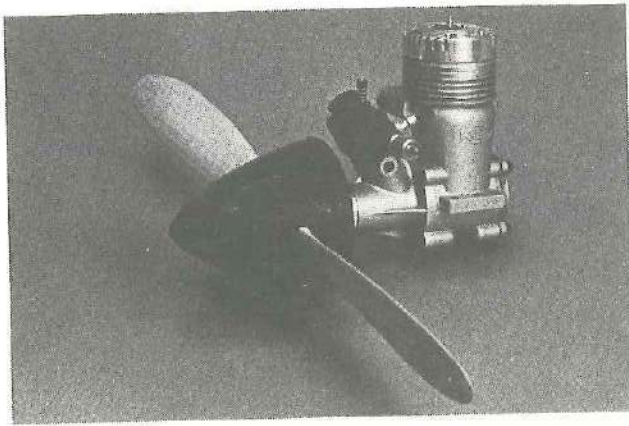
Building doesn't take long, but to prevent simple mistakes the instructions should be closely followed. Don't disregard the instructions because the assembly is so easy. Many a modeler has made **two** right fuselage sides, instead of one left and one right; moral: follow the instructions.

Sky Tiger can be finished in two different versions, resembling either a home-built/sport type, or a typical 4-place light plane. A large scale pilot figure is supplied for the home-built version; for the 4-place, an optional smaller scale pilot such as the Williams Bros. #183 is recommended. The homebuilt version is easier to do since the canopy is simply glued in place, whereas for the 4-place, the canopy must be carefully masked and painted for the "window" appearance. Instructions for both versions are given. Also shown is an option for a bolt-on wing.

List of Additional Items Needed is on page 3.

CARL GOLDBERG MODELS INC.

4734 WEST CHICAGO AVE. • CHICAGO, ILLINOIS 60651



SELECTING RADIO CONTROL EQUIPMENT

The SKY TIGER is designed for 4-channel radio control equipment. Many of the radio systems now available feature "servo reversing" switches which allow you to reverse the response of the servo. This feature simplifies radio installation and is a worthwhile consideration when selecting a radio system.

ENGINE & PROPELLER

The SKY TIGER flies well using any engine size from .40 to .61 cubic inch displacement. If you live in a warm climate, or your flying field is approximately 3,000 feet or more above sea level, you should use a .49 engine or larger. The propeller size must be matched with the engine. For example, a .40 engine may use a 10" diameter prop, while a .61 uses 11".

Balancing your propeller helps to protect your radio from the damaging effects of vibration. Good balancers are on the market, and generally are easy to use. We recommend sanding or scraping the heavy blade on the curved face rather than the flat face, and out near the tip. Try to maintain the normal airfoil curvature. And avoid scratches which might cause the prop to break.

PROP AND FUEL TANK CHART
NUMBERS IN PARENTHESIS
REFER TO 4-CYCLE ENGINES

FOR ENGINE SIZE	USE PROP SIZE	AND TANK SIZE
.40-.51 (.40-.49)	10/6, 11/4, 11/6 (12/6)	8-10 OUNCE (8)
.60-.61 (.60)	12/6 (14/6)	12 OUNCE (10-12)

IMPORTANT!

Do not use watery thin types of instant glue (such as Regular Jet, Hot Stuff, etc.) on the SKY TIGER, except for gluing plastic covering material to the plastic wing tips (see page 23). They don't glue plywood adequately and also require that your workmanship must be near perfect.

ADHESIVES

All our test models were built using SUPER JET Instant Glue, which is specially formulated to firmly glue the plywood, hardwood, plastic and balsa used in your SKY TIGER, and we strongly recommend it. Other good glues to use are "15 Minute Epoxy" or Aliphatic Resin. They will, however, add considerably to the assembly time required (they dry a lot slower than SUPER JET). Also, Aliphatic Resin does not glue plastic, so you will need one of the adhesives mentioned above (or similar) for the plastic parts.

Be careful when using instant glue to install the canopy, as applying too much glue can sometimes cause fogging to occur. A sure way to avoid fogging is to use either epoxy or Wilhold R/C 56 glue.

After you have finished gluing each unit of the model together, go back and re-glue all the joints for added strength, and just in case some joints may have been missed the first time. Be careful not to use too little glue, which leaves a model weak.

Since SUPER JET almost eliminates waiting for glue joints to dry, you can work straight through and finish each assembly by following the step-by-step building sequence. If you use epoxy, you can save time while waiting for one assembly to dry (the stabilizer, for example) by turning a few pages ahead and starting another part (the wing, perhaps). Check-off boxes are provided at each step so you can tell at a glance what steps you have completed.

TACK-CEMENTING. Sometimes it is necessary to temporarily glue a part in place that must later be removed. To provide for easy removal of the part without damage, it should have been glued in place using only a small dab of glue. This is referred to as "tack-cementing" later on in the instructions.

USING SUPER JET. SUPER JET lets you build almost as fast as your hands can press parts together! When pressed into a very thin layer, it sets almost instantly. So be careful, read instructions thoroughly and use check-off boxes to avoid errors (like building two right-hand wings — instead of a left and a right)! SUPER JET allows only for momentary positioning of parts. So be sure to trial fit parts together to check fit and placement before applying glue. After its initial bond, SUPER JET continues to strengthen. SUPER JET sets up a bit slower with plywood and hardwood, so hold such joints together a little longer than you would for balsa. SUPER JET in corners takes a while longer to dry because of its not being a thin layer. The tendency for all instant glues to set slower on hardwood or plywood and when in a thick layer can be eliminated by using Jet Set, an accelerator for cyanoacrylate glue. Jet Set bridges greater gaps, speeds up slow bonds, and provides strong joint fillets.



THE ENTIRE MODEL CAN BE QUICKLY BUILT WITH **SUPER JET INSTANT GLUE** (USE RIGHT FROM THE BOTTLE, NO MIXING REQUIRED). **JET SET** MAKES ALL INSTANT GLUES EVEN FASTER AND EASIER TO USE.

USING EPOXY. Epoxy comes in two parts which need to be mixed before using. Paper cups and wood coffee stirrers are useful for mixing. When buying epoxy, check the package to see how long it takes to set (some formulas set in 5 minutes, others may take hours). We recommend 15 minute epoxy. Disposable wood strips, cotton swabs, cheap stiff bristle brushes, or acid brushes from auto stores make good applicators.

Because epoxy is so thick, it's easy to apply too much. If you use epoxy to build the entire model, be especially careful to use it sparingly when assembling the fin, stabilizer and wings.

CAUTION

Some people may experience allergic reactions when exposed to fumes from instant glue or epoxy. This is very rare. However, it is always important that such glues, and also paints, thinners and solvents, be used with adequate ventilation to carry fumes away.

COVERING THE MODEL

Many good covering materials are available. We recommend strong films or light fabric types. Be careful and do not substitute "lighter" grade material, which may not provide torsional strength. Ask your dealer!

CANOPY

The Sky Tiger canopy was carefully designed to give the model its distinctive scale-like lines, yet still be easy to install. For good final appearance, follow instructions closely, especially those dealing with removing scrap plastic from canopy base and canopy installation. For the optional 4-place canopy, complete painting instructions are on page 22.

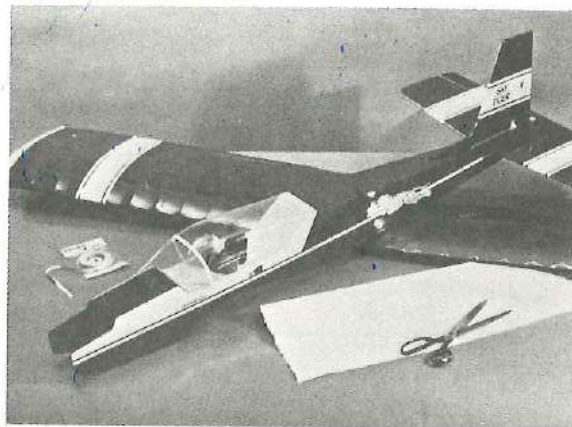
In our tests we were unable to tint the canopy plastic to our satisfaction and we suggest the canopy not be tinted. However, if tinting is desired, experiment with scrap canopy flashing material before trying to tint canopy itself. Darker colors of Ryt dye powder, like black or deep blue, in hot tap water may produce an acceptable degree of tint. Or, instead of dye, carefully applied "transparent" spray enamels can produce an effective tint (apply inside only, they are not fuel proof).

BOLT-ON WING OPTION

Attaching the wing to the fuselage with dowels and rubber bands is quite simple, and reduces damage if the wing hits something during landing. However, many experienced flyers prefer the precise alignment and better appearance of bolting the wing on with two nylon bolts and a dowel. While this option is not really difficult, it does require care to make a good installation. To provide for it, follow the step-by-step building sequence, and pay particular attention to all instructions marked by this bolt symbol when it appears.



For a rubber-banded wing, simply disregard any information preceded by this bolt symbol.



Additional Items Needed

- 4-channel (or more) Radio Control Set
- SUPER JET or Epoxy glue (large)
- 1/4 oz. Instant Jet
- .40 to .61 R/C engine
- Propellers, fuel tank and tubing to suit engine
- 2 1/4" CG Snap-On Spinner
- 27-30 sq. ft. of covering material
- Small can of touch-up paint (fuel-proof)
- 1/4" CG Color-Stripe tape
- One 2 1/4" and two 2 1/2" Wheels
- 1/2" x 8" x 12" CG R/C Foam Rubber
- 1/16" x 1/4" Wing Seating foam tape
- Box of #64 rubber bands
- Wilhold R/C 56 (canopy glue)

OPTIONAL PARTS

- 4" silicon tubing, large (exhaust extension)
- Regular Klett hinges (RK3-15)

For Optional "4-Place" Canopy

- Polyurethane Paint (small spray can)
- Pilot (Williams Bros. No. 183)

For Connecting to Servos

- Additional CG Pushrod Connectors (No. 212)

For Door Details

- 1/16" black CG Color-Stripe tape

Paint for Pilot Figure

- Artist's acrylics, modeler's enamels, etc.

Tools & Supplies Needed

(You probably already have most of these)

- Miscellaneous rubber bands
- Wax paper or plastic wrap
- Modeling knife or single edge razor blade
- Sandpaper block & sandpaper; any grade 100 to 200, and any grade 240 to 320
- A few dozen straight pins ("T" pins best)
- Light power or hand drill & drill bits (sizes 1/16", 1/8", 5/32" and 1/4")
- Two Allen wrenches (1/16" for #6 set screw & 7/64" for #6 socket head screw)
- Flat building board (that you can push pins into) 26" x 50"
- Pliers
- Small screwdrivers (1/8" and 3/16" blade tips)
- Iron for applying covering (small household or travel iron may be okay)
- Masking, drafting, or scotch tape (for holding parts during assembly)

OPTIONAL TOOLS

- CG Engine Test Stand (No. 293)
- Propeller balancer
- Combination prop/glo-plug wrench
- CG Hinge Slotting Kit (No. 269)

Special Parts & Tools Required For Bolt-On Wing

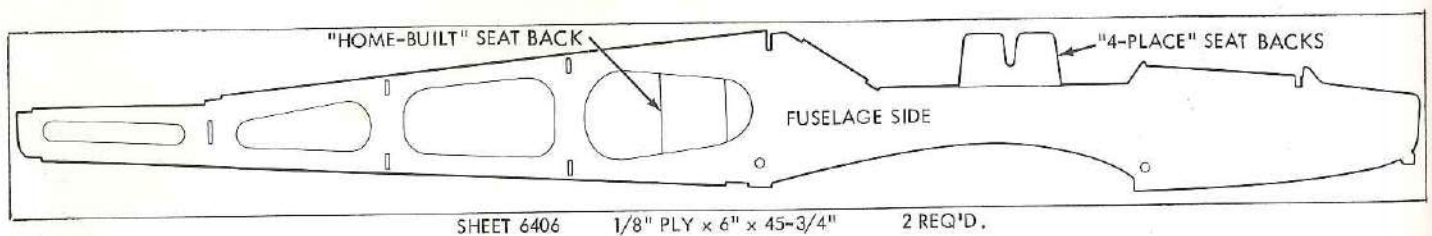
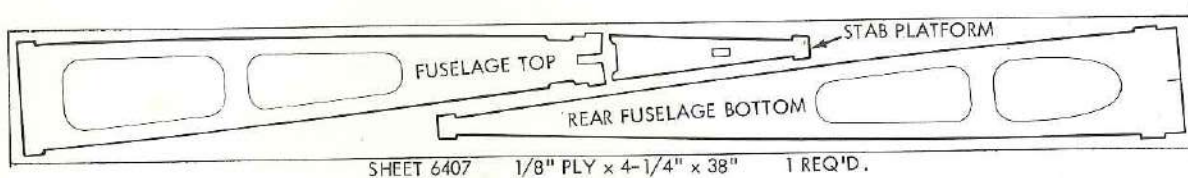
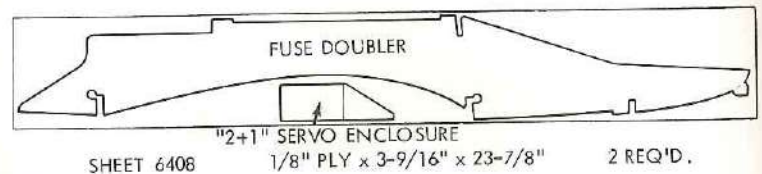
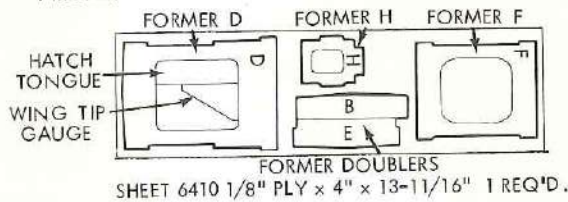
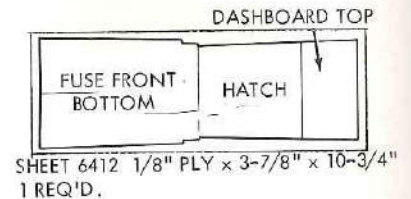
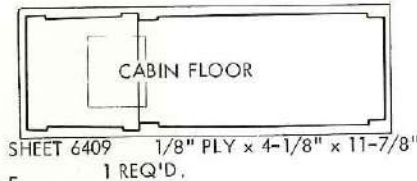
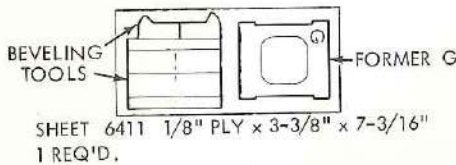
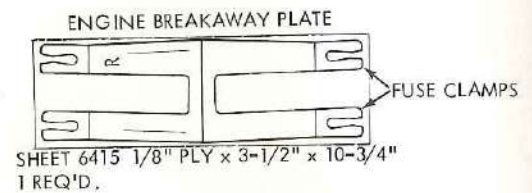
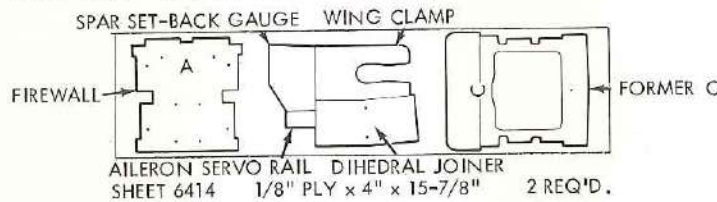
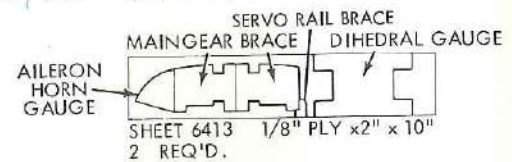
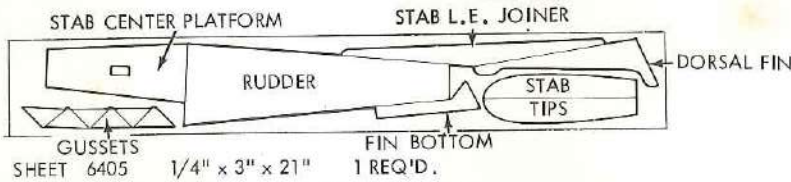
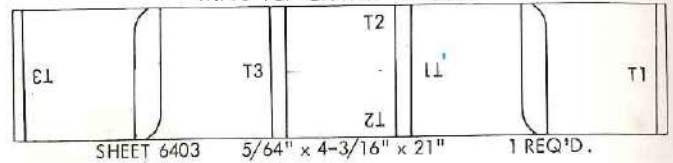
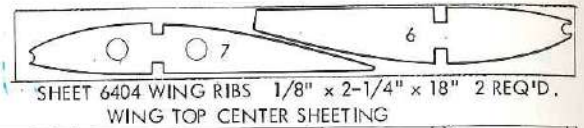
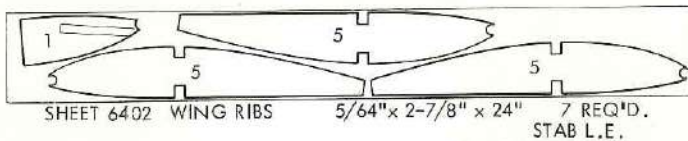
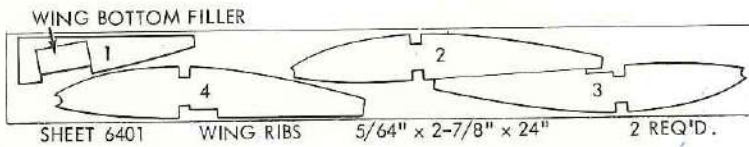
- 1/4" diameter x 3" dowel
- Two hardwood blocks 1/2" x 1/2" x 2-3/4"
- Two pine or hardwood blocks 1/2" x 1/2" x 1-5/8"
- 1/8" balsa for two No. 1 front ribs
- Two 1/4-20 x 1-1/4" nylon screws
- 1 3/64" or 7/32" drill bit
- 1/4"-20 tap or tapping screw
- Small rat-tail file
- Klett Safety Driver (No. 103)

WOOD PARTS IDENTIFICATION

Be careful when removing parts (such as fuselage sides) from die-cut sheets. Long parts are fragile until glued into a structural unit. If necessary, use a razor knife or razor saw to assist in the removal of parts from sheet. Sometimes a little trimming and sanding can improve parts where desired. Save scrap until model is completed, in case you should miss a part. Scrap is used also in some building steps on the plan. Other easily recognized parts, such as engine bearers, are not shown here.

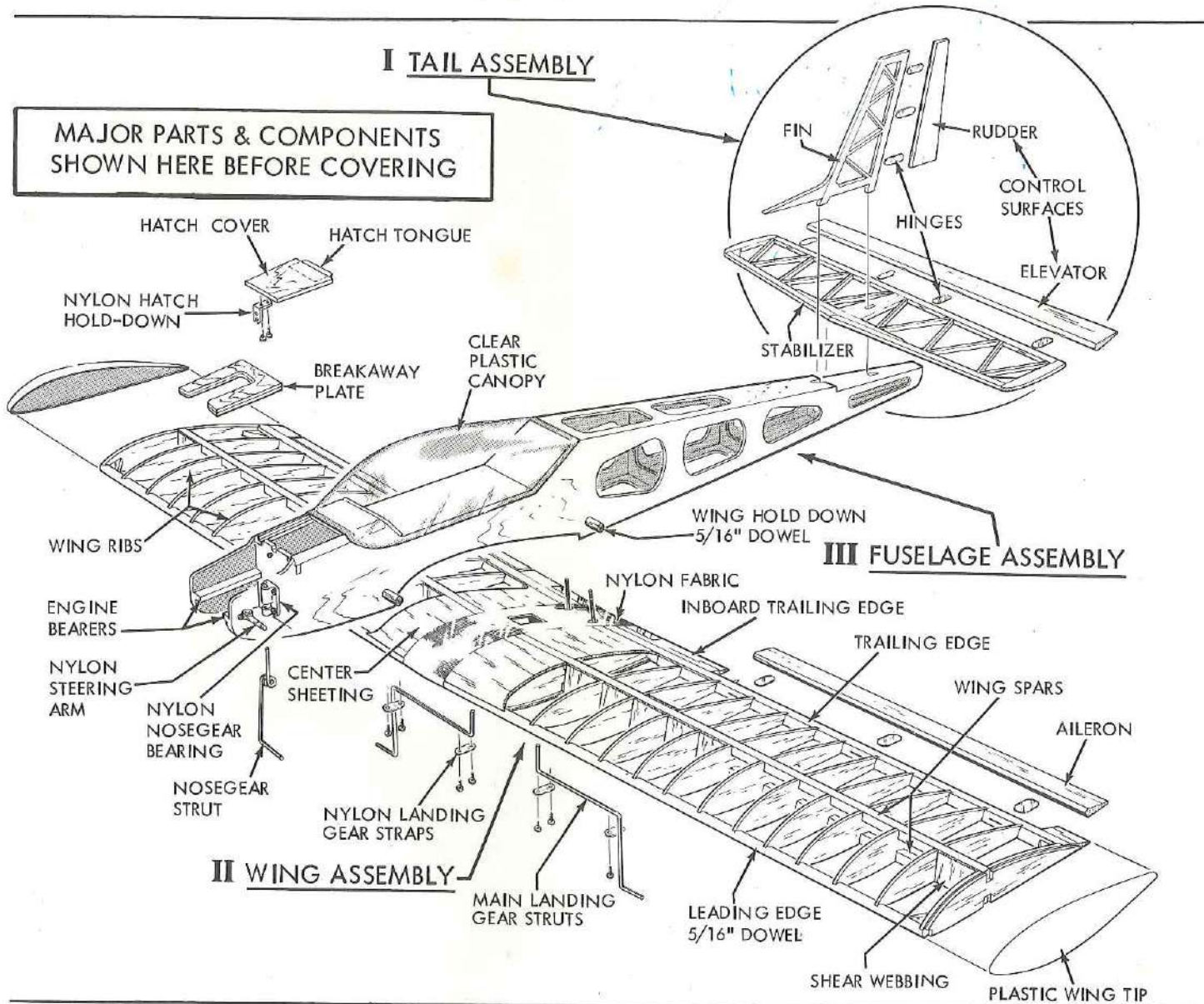
ABOUT THE WOOD IN THE KIT

We strive to supply good quality materials in your kit. Wood parts are inspected with regard to the function they will serve. If an imperfection is spotted in a scrap corner of a die-cut sheet and doesn't affect actual parts, the sheet is considered acceptable. Also, internal stresses in wood are relieved as it is cut into parts. These relieved stresses may cause some parts to bow. Bows in wood parts (such as leading edge dowels) readily straighten out as they are glued into a structural unit.

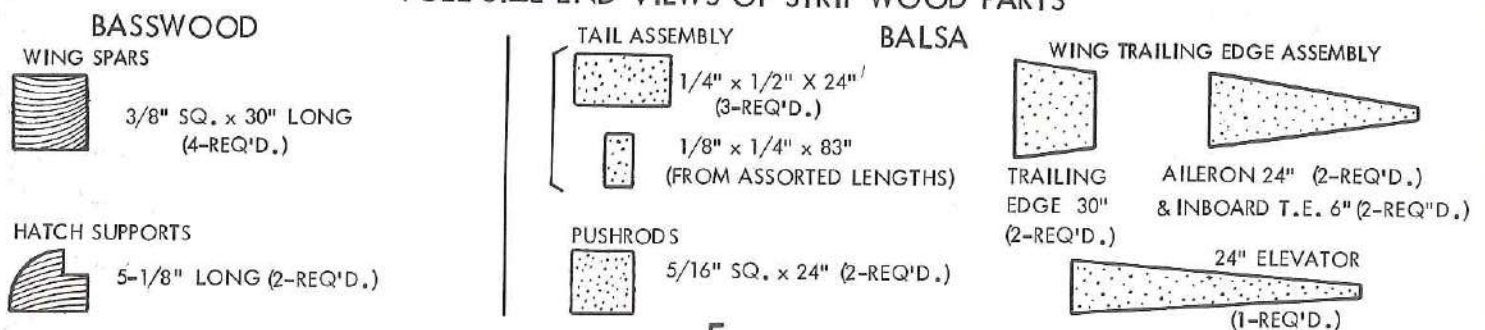


BEFORE STARTING ASSEMBLY OF MODEL, read instructions carefully and construct your model in the following order:

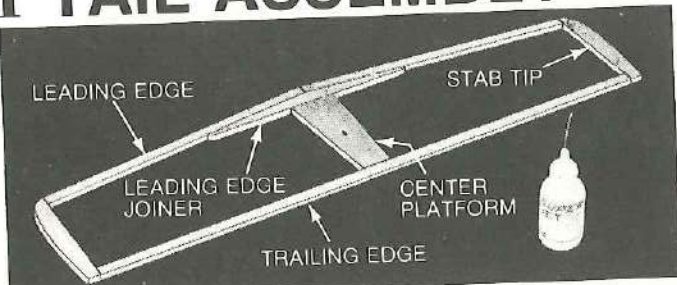
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|--|----------------------------------|
| I. TAIL ASSEMBLY (Steps 1 thru 11, Page 6 of this booklet) | V. FINAL ASSEMBLY (PAGE 26) |
| II. WING (Steps 1 thru 37, Page 8) | VI. RADIO INSTALLATION (Page 27) |
| III. FUSELAGE (Steps 1 thru 14, Page 16) | VII. WHERE TO FLY (Page 30) |
| ENGINE INSTALLATION & FUSELAGE COMPLETION (Steps 1 thru 13, Page 19) | VIII. RADIO CHECK (Page 30) |
| IV. COVERING and TRIM (Page 23) | IX. FLIGHT PREPARATION (Page 31) |
| Hinge Installation (Page 24) | X. BASIC AEROBATICS (PAGE 31) |
| Cockpit detailing & Canopy Installation (Page 26) | |



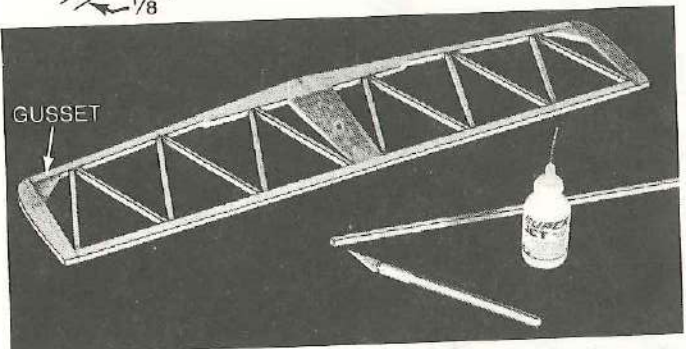
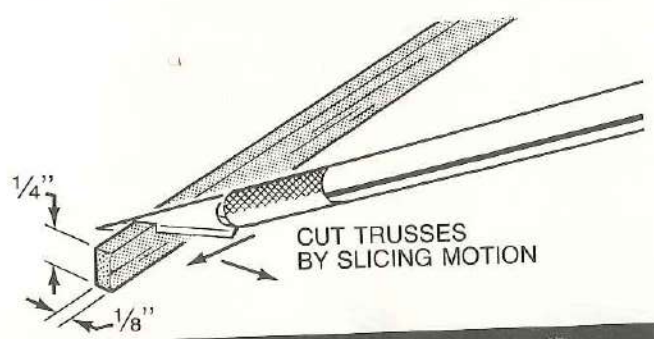
FULL SIZE END VIEWS OF STRIP WOOD PARTS



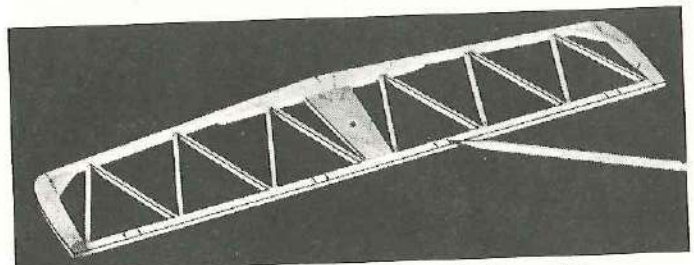
I TAIL ASSEMBLY



- Make stabilizer (stab) leading edge (L.E.) from $\frac{1}{4}$ " x $\frac{1}{2}$ " balsa sticks. Cut balsa carefully to match with plan at center joint and exact length at tips.
 - Pin in position, and glue at center joint.
 - Using die-cut stab tips, L.E. joiner, center platform and $\frac{1}{4}$ " x $\frac{1}{2}$ " balsa, glue stab outline together.



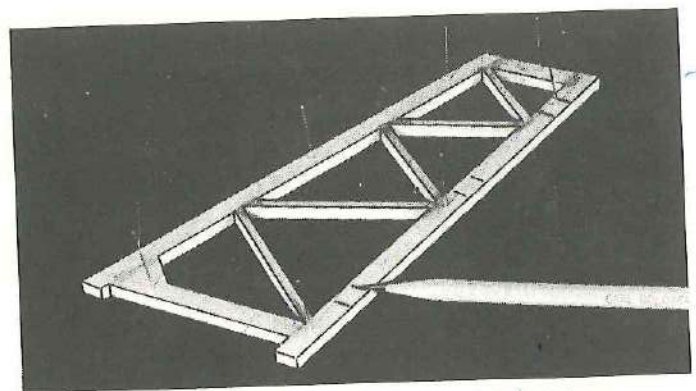
- From $\frac{1}{8}$ " x $\frac{1}{4}$ " Strip balsa, cut all trusses to size over plan. Trim to fit well — don't force into place. Glue in place.
 - Glue gussets in place.
 - Let dry thoroughly.



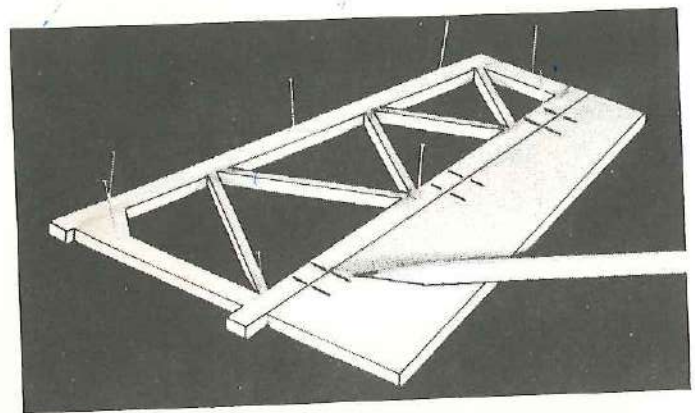
- Lightly mark hinge locations on T.E. from plan.



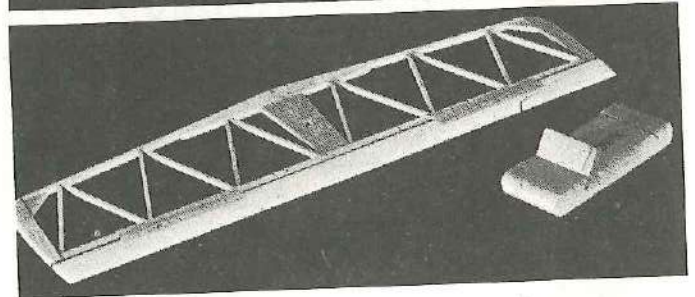
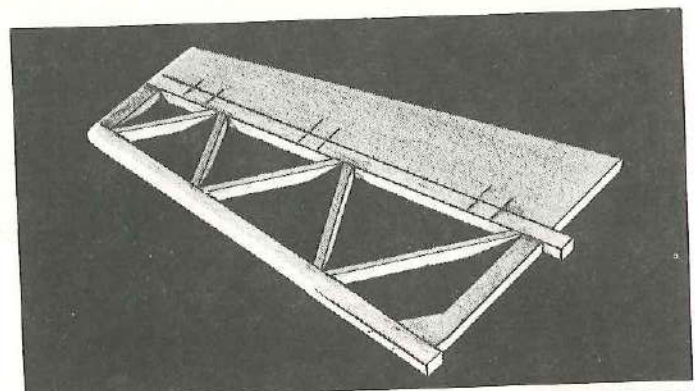
- Using 3 or 4 small drops of glue, tack-cement elevator to stab. Carefully transfer hinge locations onto elevator.



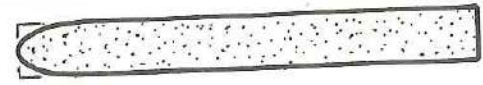
- Assemble fin in same manner as stab. Let dry.
 - Mark hinge locations on fin T.E.



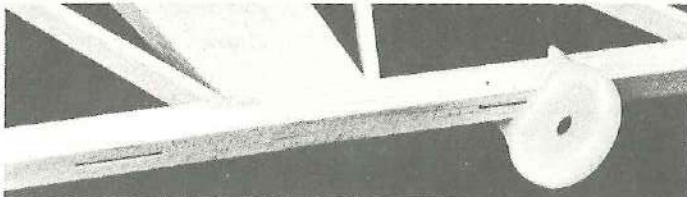
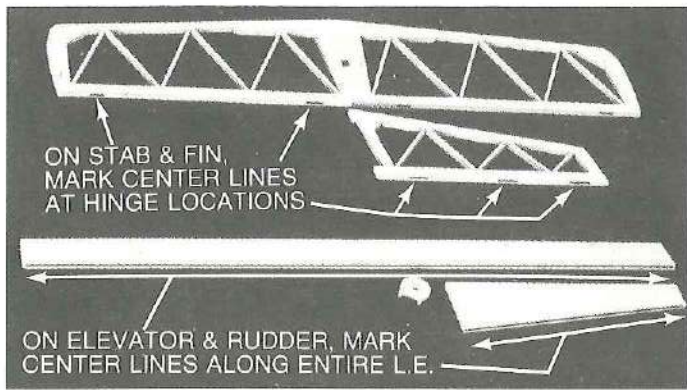
- Tack-cement rudder to fin. Carefully transfer hinge locations onto rudder.



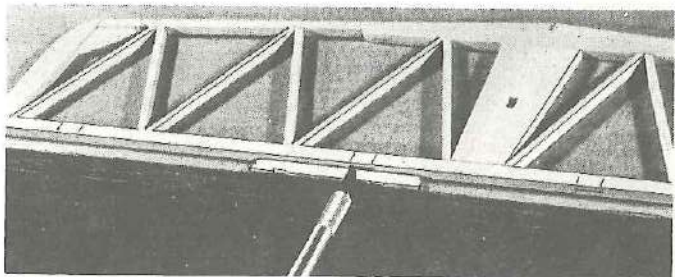
TYPICAL EDGE ROUNDING



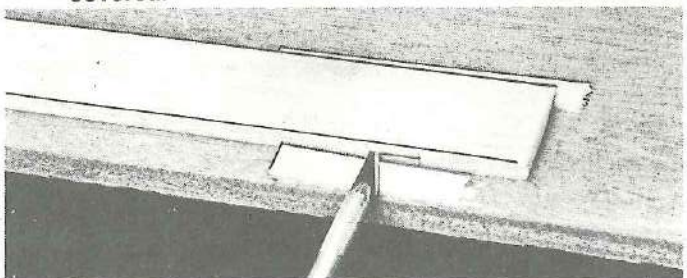
- Flat sand fin and stab, round outer edges except bottom & lower 2" of fin L.E. Be sure hinge locations remain. Sand elevator tips to blend with stab.



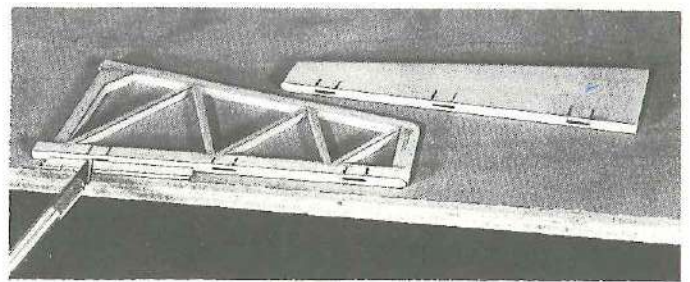
7. Carefully separate elevator from stab, and rudder from fin. Gently sand to remove rough spots from tack-cementing.
- Using CG Center-Line marker provided, mark center lines along edges of parts as shown above. Tilt marker so guide pegs touch the wood, then lightly pass the marker back and forth. Point will scribe center line.



- 8a. Move stab T.E., close to table edge.
- Using scrap ply from a fuselage sheet as a shim, cut slots for hinges as shown in sketch. Sand ply if necessary so blade cuts exactly on center.
- NOTE: Although you are slotting for hinges now, the hinges are not permanently installed until after model is covered.

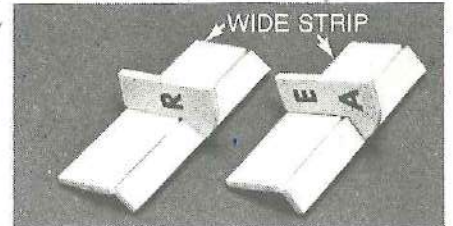


- 8b. Move elevator close to table edge, support thin edge of elevator with wing rib scrap as shown in sketch and make hinge slots.



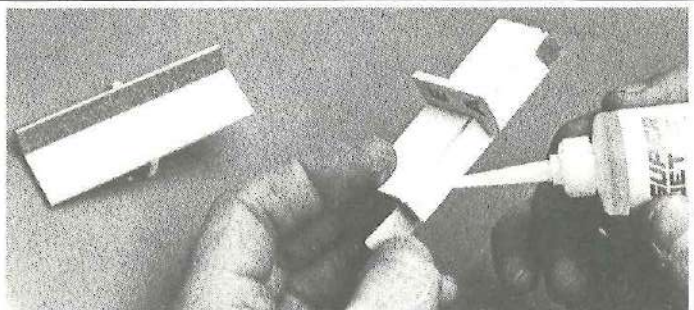
9. Repeat slotting method in steps 8 & 8a for fin and rudder.

ASSEMBLING DIE-CUT BEVELING TOOLS (FROM 1/8" PLY)

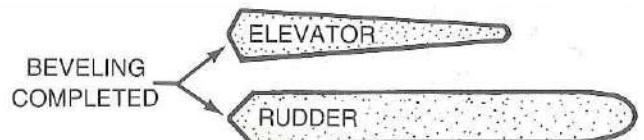
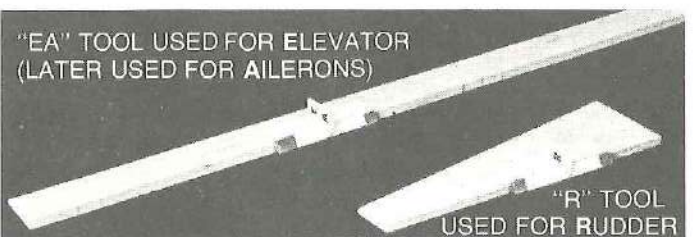


- 10a. First, glue narrow strip to handle, keeping them square, as shown above left. Then glue wide strip to handle and narrow strip, again keeping things square.

CUT TWO STRIPS SANDPAPER THIS SIZE



- 10b. Cut two strips of 100-200 grit sandpaper to size shown above. Tack-cement sandpaper to tools as shown below.

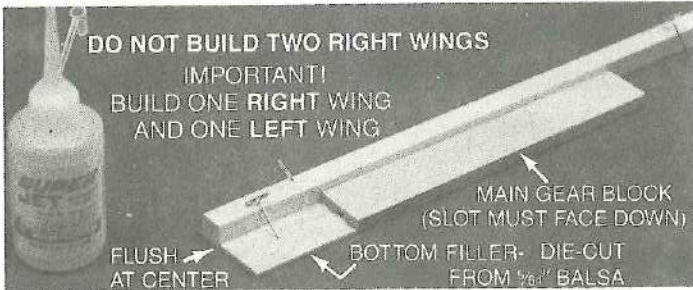


11. Tape T.E. of elevator and rudder to work surface. Using appropriate beveling tool, sand L.E. to center line. Turn parts over and repeat beveling for other side.

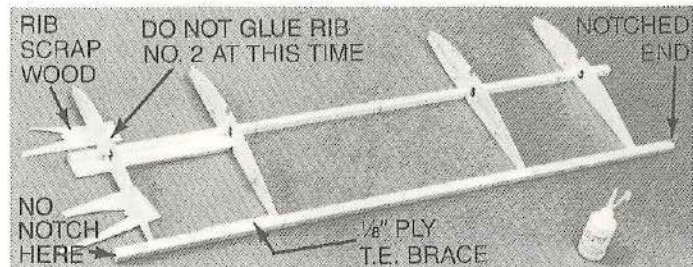
THIS COMPLETES THE TAIL ASSEMBLY CONSTRUCTION.

II WING ASSEMBLY

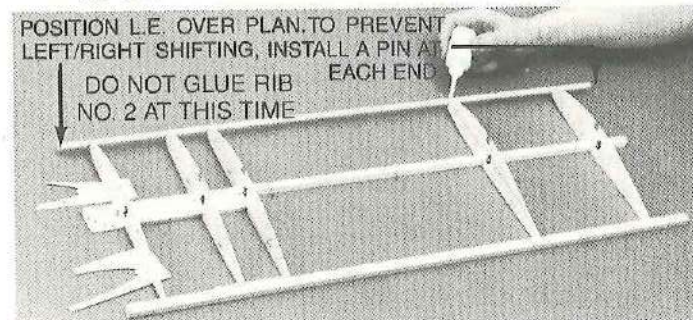
SINCE THE WING IS BUILT IN TWO HALVES, AND STEPS 1 TO 13 ARE REPEATED IN THE PROCESS, TWO CHECK BOXES ARE PROVIDED WITH EACH OF THESE STEPS, ONE FOR RIGHT WING AND ONE FOR THE LEFT. THE RIGHT WING IS BUILT FIRST.



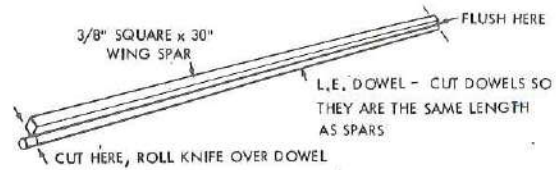
- Position one spar in place over RIGHT WING (or LEFT WING) on plan. Align spar end at center of wing on plan. Hold spar in exact position by crosspinning at circled locations on plan. CAUTION: Do not build two RIGHT WINGS!
 - Pin and glue $\frac{5}{64}$ " die-cut balsa bottom filler next to spar, and flush with end of spar, as shown above.
 - Position the slot in $\frac{1}{4}$ " x $\frac{7}{8}$ " x $5\text{-}\frac{13}{16}$ " ply Maignear (M.G.) block facing down. Applying a thick bead of glue to long edge of M.G. block, butt it against bottom filler, and glue it solidly to spar and filler as shown above. Hold for approximately 30 seconds.



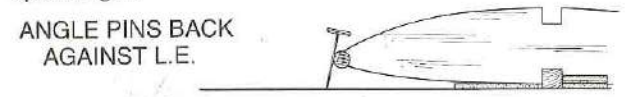
- Using **no** pins, set TRAILING EDGE (T.E.) in place on plan. **IMPORTANT:** The T.E. has no notch at one end — this unnotched end must be at the **wing center** as shown.
 - Using **no** glue, place the following four ribs in their respective T.E. notches: ribs Nos. 2, 5, 5 & 5, hooking them over the spar as you go. Place rib wood scrap under rib 2 as a shim.
 - Align T.E. and ribs over plan, and pin in place. (Note: If a part appears not to "fit" the plan exactly, don't worry, this is due to expansion and shrinkage of the plan paper).
 - Do not glue rib No. 2 at this time.** Glue ribs No. 5 to T.E. and spar.
 - Glue $\frac{1}{8}$ " x $\frac{7}{16}$ " x $3\text{-}\frac{9}{16}$ " ply T.E. brace to T.E. as shown. Note: four $3\text{-}\frac{9}{16}$ " pieces are provided; two are T.E. braces & the other two are later used as servo mounting rails.



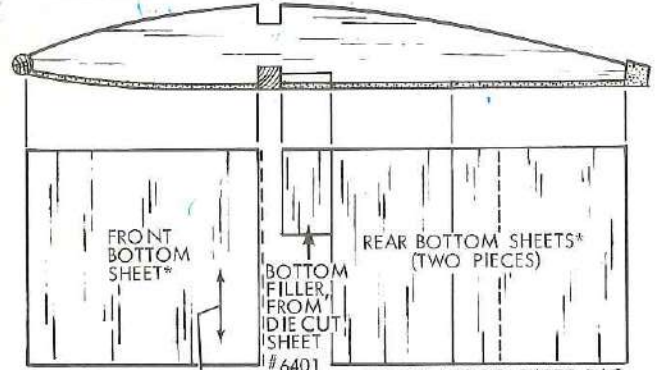
- Position rib 4 in place over plan, and glue it to T.E. brace and spar.



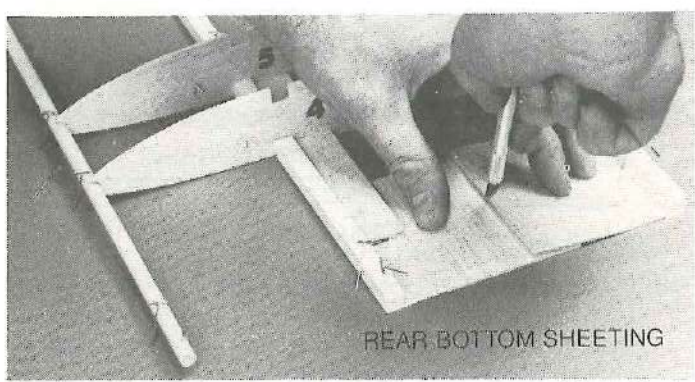
- Compare length of Leading Edge dowels to a wing spar. If dowels are longer than spar, cut them to match spar length.



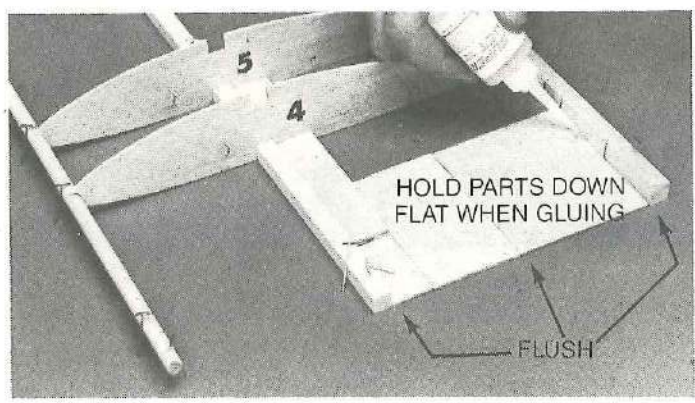
- Position 30" LEADING EDGE (L.E.) dowel in place over plan. Press L.E. into rib recesses, holding it tight with angled pins as you go.
- Do not glue Rib No. 2 at this time.** Glue rib 4 and ribs No. 5 to L.E.



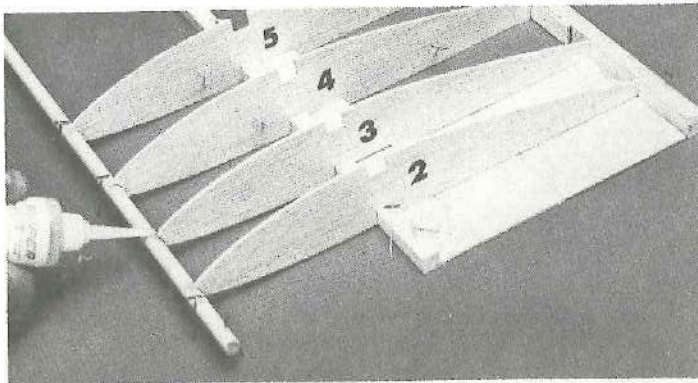
NOTE: WOOD GRAIN DIRECTION IS THE SAME IN ALL FOUR SHEETS. **IMPORTANT:** BOTTOM SHEETS ARE PRE-CUT TO FIT AS SHOWN ABOVE—BE SURE TO POSITION THEM CORRECTLY AS DESCRIBED IN STEPS 4 & 23b.



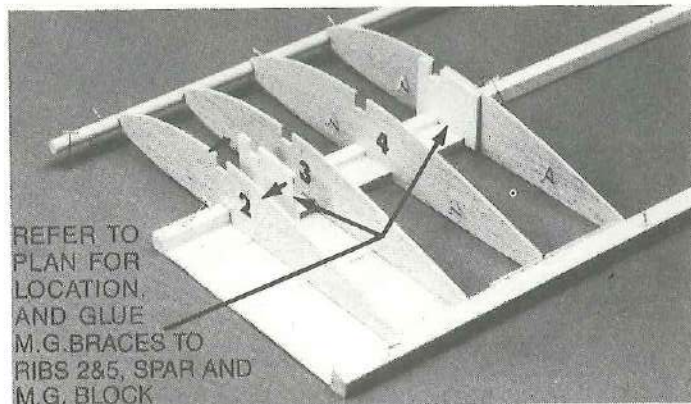
- Position one rear bottom sheet at rear of M.G. block. Place other rear bottom sheet at T.E. so it overlaps the first one. Holding both sheets in place, trim first sheet even with edge of second sheet.



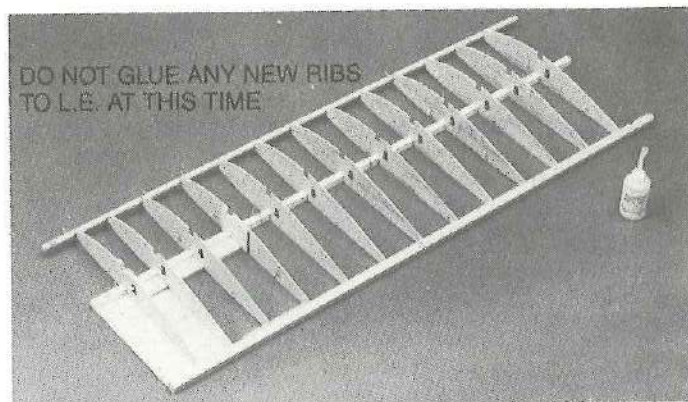
- Glue two rear sheeting pieces together, and to M.G. block and T.E.



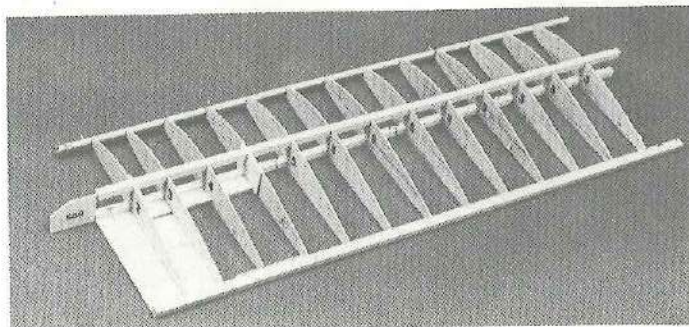
6a. Position and glue ribs No. 2&3 to L.E., spar, bottom sheeting, and T.E. (align rib fronts over guide lines on plan).



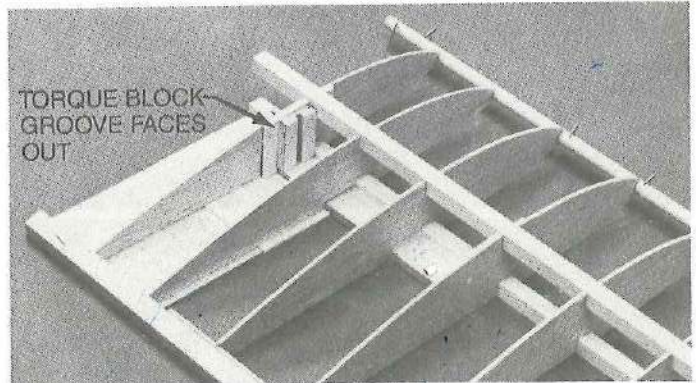
6b. Referring to locations shown on plan and in photo above, glue two M.G. braces solidly to ribs Nos. 2&5, spar and M.G. block.



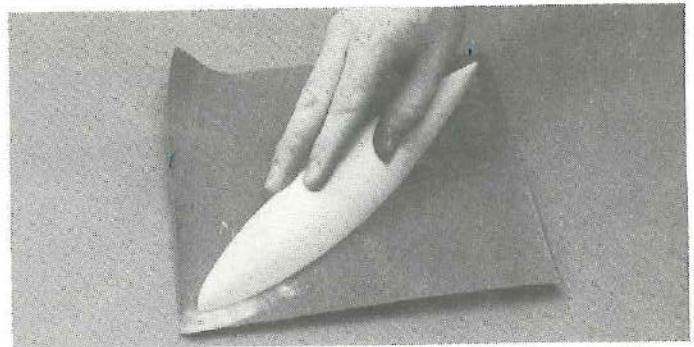
7. Working one at a time, glue remaining ribs No. 5 to spar & T.E. only. Hold each rib up straight as it dries.



8a. Position the Set Back Gauge (SBG) touching the bottom spar. Touch end of top spar to gauge, and set spar in rib slots.
 Glue top spar to all ribs.

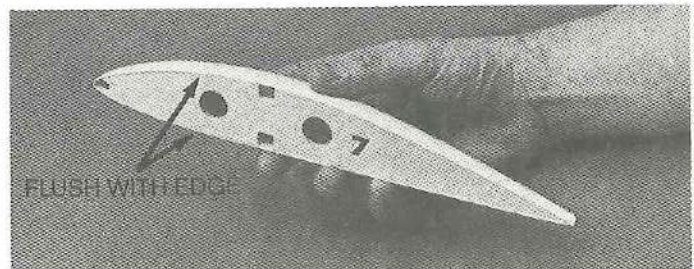


8b. Position the grooved ply torque block as shown in photo above and glue it solidly to M.G. block, rib No. 2, brace, and spars.



The Sky Tiger vac-formed ABS plastic wing tips provide toughness against inevitable ground scrapes. If left white, they won't need re-finishing. If painted, re-finishing will be easy. Avoid using lacquer based paints.

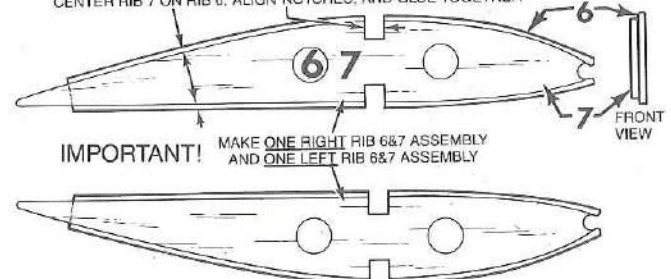
9a. Position pre-cut opening of right (left) plastic wing tip facing down on flat sandpaper. Lightly wipe tip over sandpaper a few times. Then, run your finger nails along edges to remove burrs.



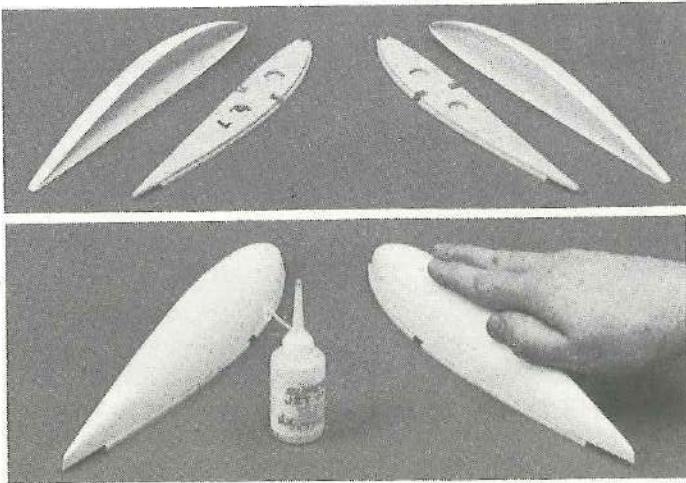
9b. Fit rib 7 into plastic tip so rib is flush with cut edge (if rib is too tight, sand lightly until it fits). Remove rib 7 from tip.

DO NOT MAKE TWO RIGHT 6&7 ASSEMBLIES

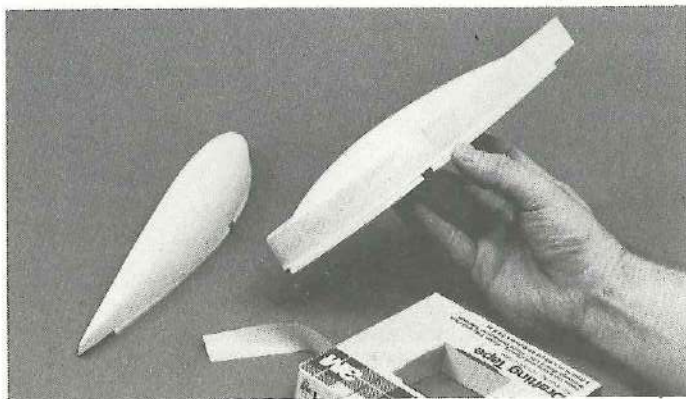
CENTER RIB 7 ON RIB 6, ALIGN NOTCHES, AND GLUE TOGETHER



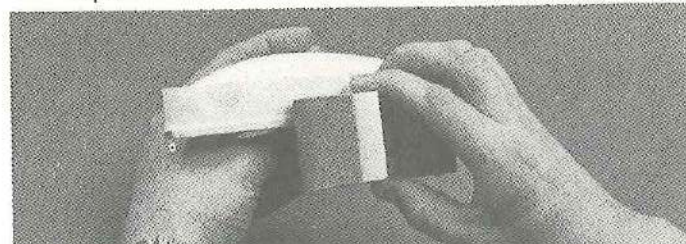
10a. Position rib 7 so it's centered on rib 6 and notches are aligned, and glue in place.



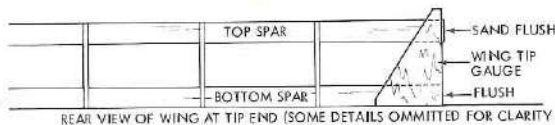
10b. With rib 6 flat on table, glue plastic wing tip to ribs Nos. 6&7 (rib No. 6 is slightly oversize for final sanding).



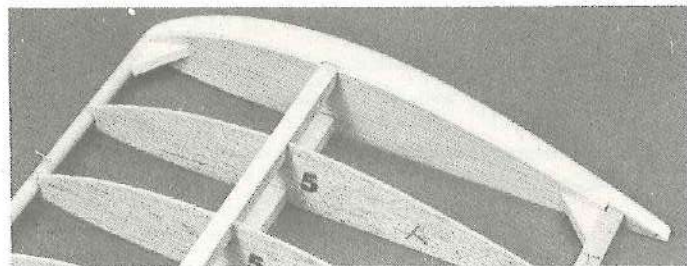
10c. Maintaining a 1/8" distance from rib 6, wrap plastic tip with tape.



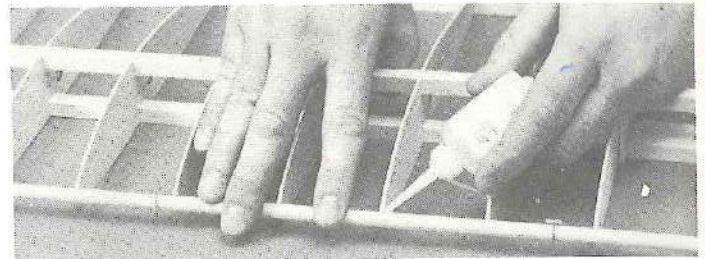
10 Sand rib no. 6 flush with surface of plastic wing tip.



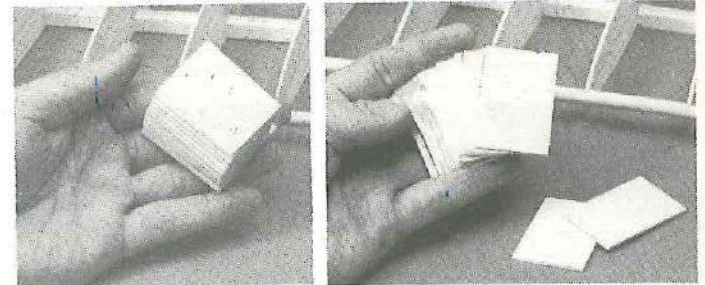
11a. Flush wing tip gauge with end of bottom spar and mark this location on top spar. Sand top spar back to this mark.



11b. Using no glue, carefully align wing tip assembly with end of wing. When satisfied with alignment, glue tip to wing.
 Glue wing tip gussets to L.E. and T.E.

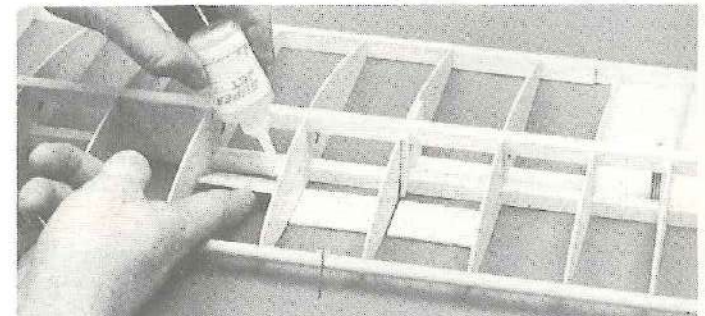


12. Working a few ribs at a time, apply SUPERJET to glue loose ribs to L.E. Gently squeeze L.E. into ribs and hold until set. Repeat until all ribs are glued to L.E.

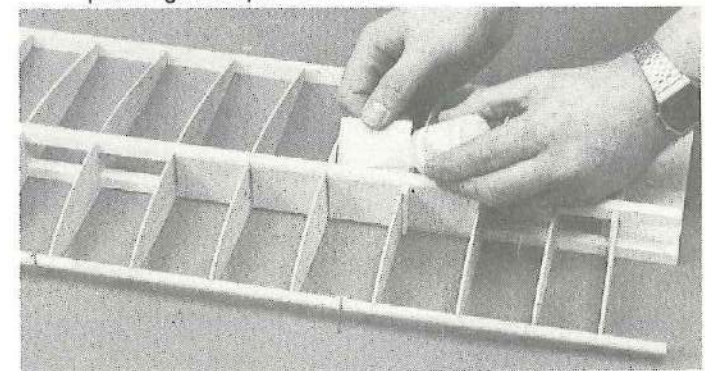


IMPORTANT!

13a. The shear webs to be installed in the next step are packaged in a plastic wrap as shown in photos above.

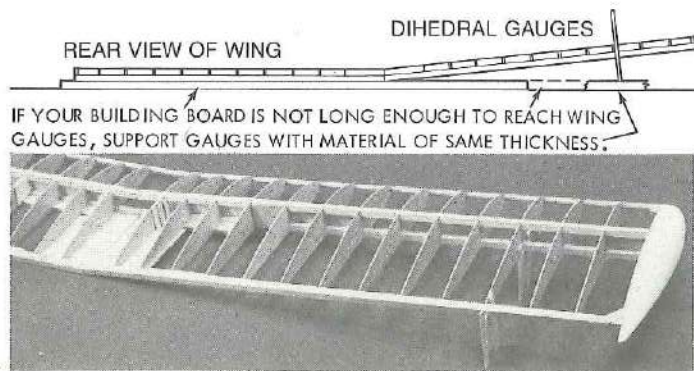


13b. Install pre-cut webs in wing at positions shown on the plan as follows: Apply two ribbons of glue (near top and bottom), position webs equally on spars then press web up in place against spars until set.



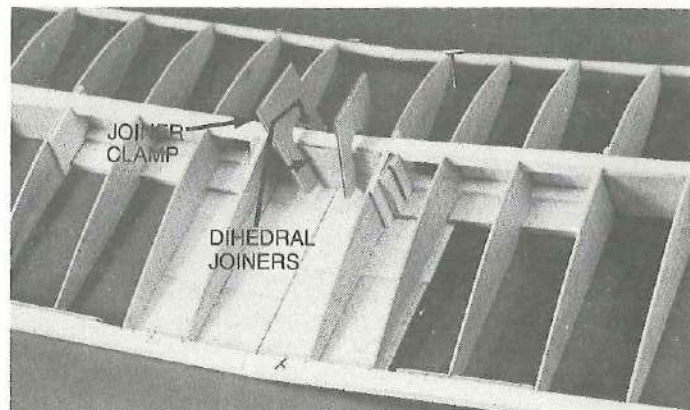
13 Continue gluing webs to spars at locations shown on plan; cut 1/4" off webs next to center sheeting.

14. Repeat steps 2 through 13 for LEFT wing.

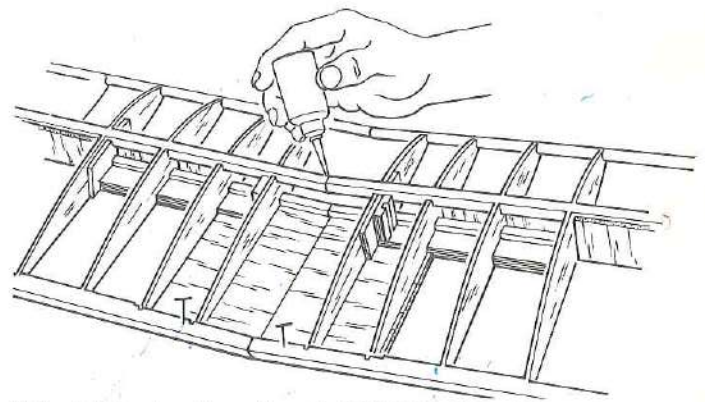


SUPPORT WING AT 4th RIB IN FROM TIP

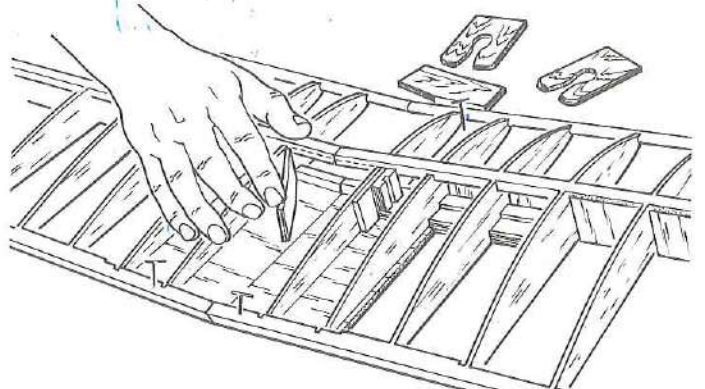
15. With left wing still pinned down, position RIGHT WING in place next to it. Raise RIGHT WING tip and support it at 4th rib in from tip using dihedral gauges. Hold gauges firmly to the ribs by tack-cementing, or stationery clamps, clothespins, etc.



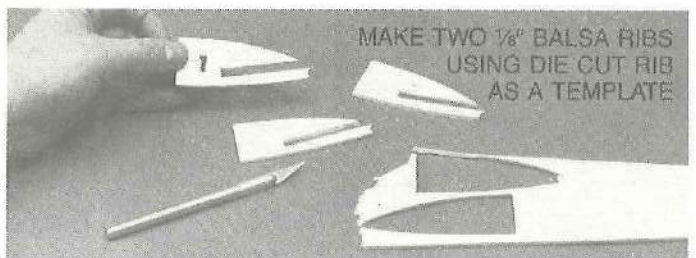
16. Study entire center joint; all end parts of right wing should just touch those of the left (tiny gaps are alright). If the fit between most parts is a little loose because one part protrudes too much, **slightly** sand only the protruding part for better fit. When sanding, it is better to take off too little than too much!
 TEMPORARILY set dihedral joiners in place on each side of spars (for front joiner, use spacers underneath as shown in photo below). Use die-cut clamps provided to hold joiners tight against spars.
 Be sure RIGHT WING is held firmly against LEFT WING and pin in place as shown above. Remove joiners.



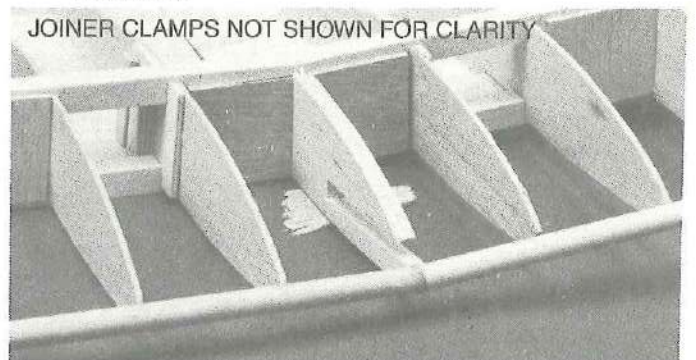
17. Apply a liberal bead of SUPER JET to joints of L.E., spars, sheeting, and T.E.



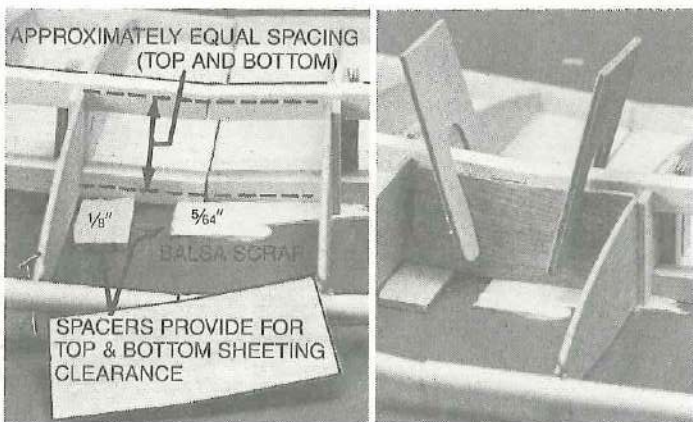
18. Apply two beads of SUPER JET to one side of both joiners, near the top and bottom. Position one end of joiner in place and swing the other end up against spars — hold momentarily. Repeat for other joiner — immediately reinstall clamps (from step 16) to hold both joiners tight on spars.

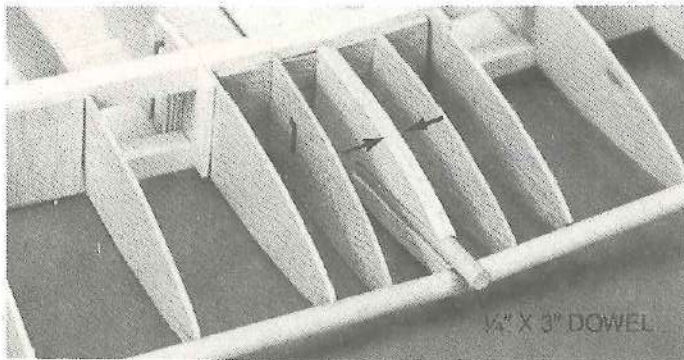


19. For use on the bolt-on wing only, there is a 1/4" wide slot on front rib No. 1; cut this slot out of one rib.
 From 1/8" balsa (not furnished), make two ribs using the slotted No. 1 rib as a template. The template rib can then be discarded.

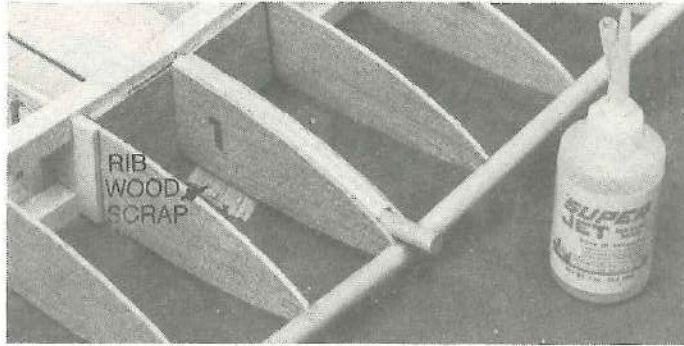


- 20a. Place rib wood scrap in front of the spar at the wing center joint. Position one 1/8" rib so one side aligns with centerline of wing. Adjust rib to align with L.E. and spar center joint. Glue in place.
 Glue second 1/8" rib to first rib, making 1/4" thick center rib.

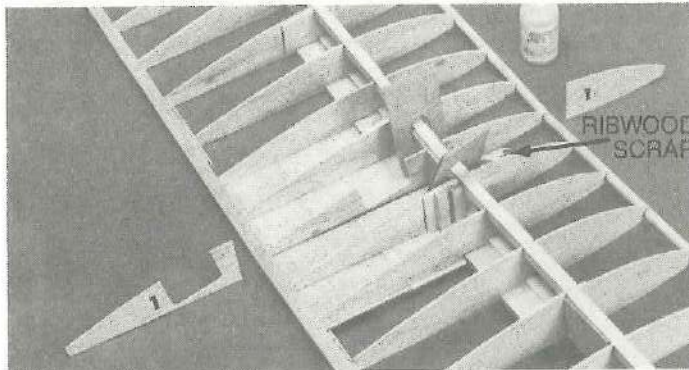




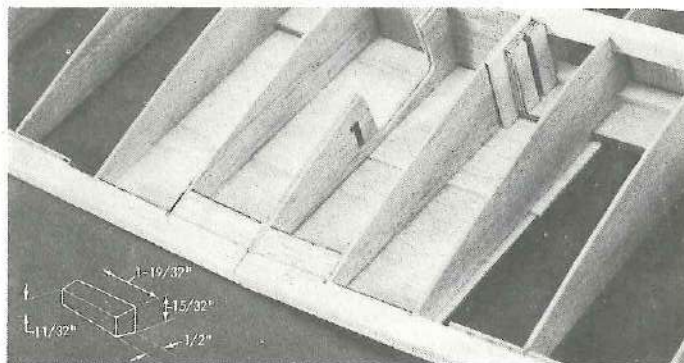
- 20b.** Glue a 1/4" x 3" dowel (not furnished) into the doubled 1/8" balsa ribs.
 Glue unslotted No. 1 ribs to both sides of 1/8" ribs, applying extra glue at the dowel area to assure total glue coverage.



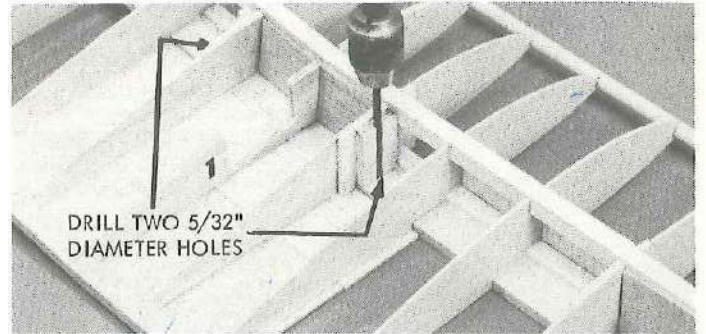
COMPLETED DOWEL INSTALLATION



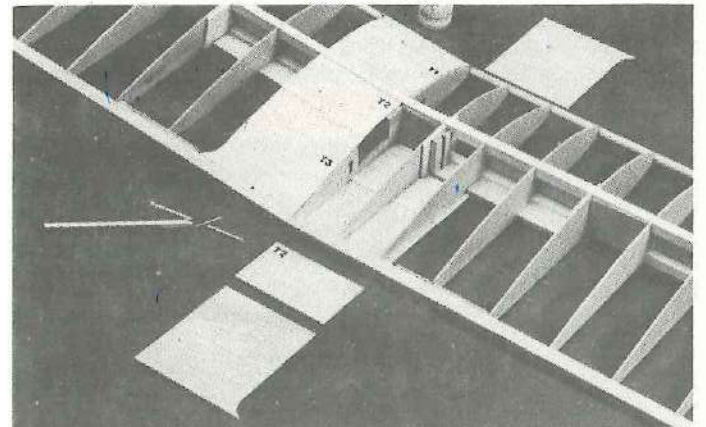
- 21a.** Position front and rear halves of one rib No. 1 so one side aligns with centerline of wing. Place rib wood scrap under front rib No. 1. Adjust rib to align with spar center joint, T.E., bottom sheeting, and L.E. joints. Glue in place.
 Glue remaining halves of second No. 1 rib to first rib, making double thickness center rib at center joint.
 Be sure to glue any joints in the wing still needing glue.



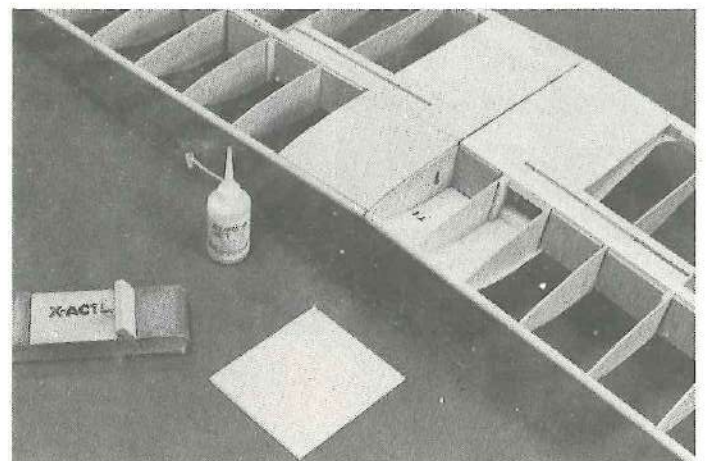
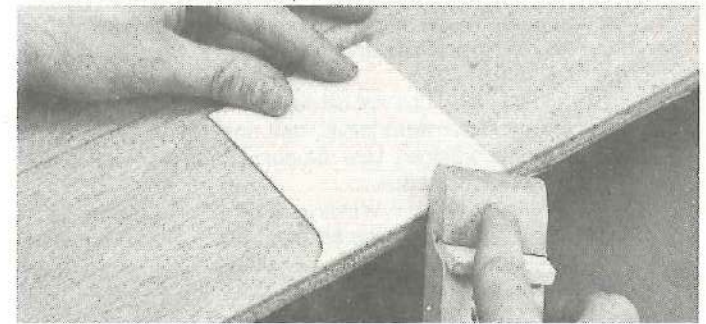
- 21b.** From pine or very hard balsa, make two filler blocks as shown above.
 Glue filler blocks in wing between center ribs at T.E.



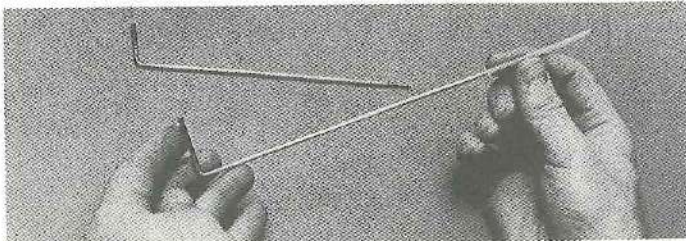
- 22.** Drill a 5/32" diameter hole through each M.G. block using torque block slots as a drilling guide.



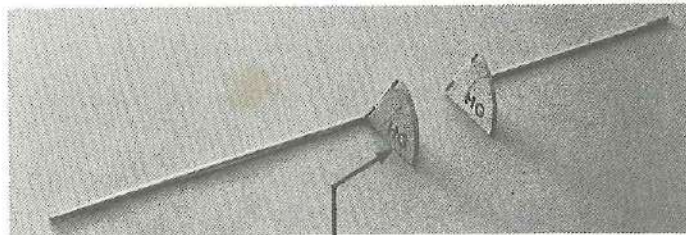
- 23a.** Try top sheeting in place, trimming to fit as required. Match edge of sheeting with center of rib No. 1. Optional: for better fit at leading edge, slightly bevel bottom front edge of sheets T1 as shown below. For bolt-on wing, trim sheeting for dowel.
 Glue sheeting in place.
 Remove all clamps, etc.



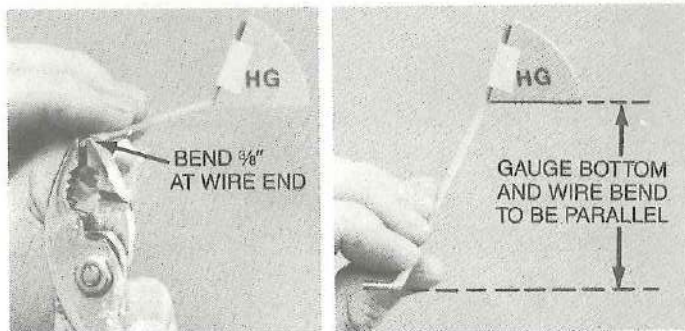
- 23b.** Turn wing upside down and install bottom front sheeting, again beveling the sheeting at the leading edge for better fit.
 Glue any joints still needing glue.



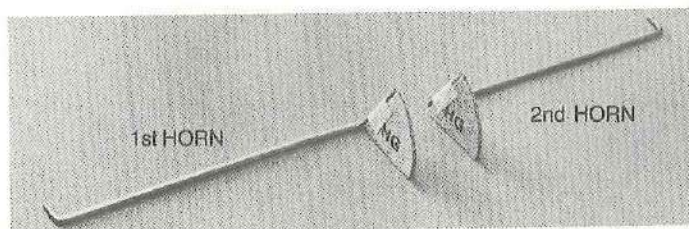
24a. Slide nylon tube onto aileron horn wire. Repeat for other tube and wire.



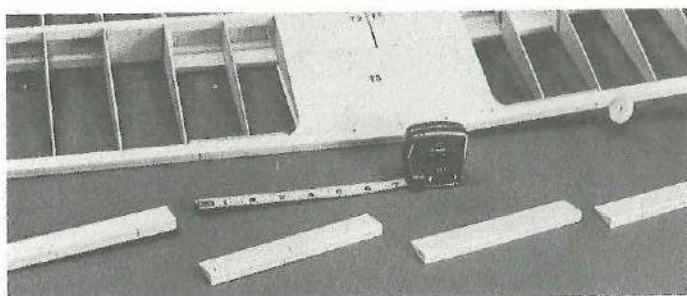
24b. Tape Horn Angle Gauges securely to THREADED ends of strip aileron horns as shown.



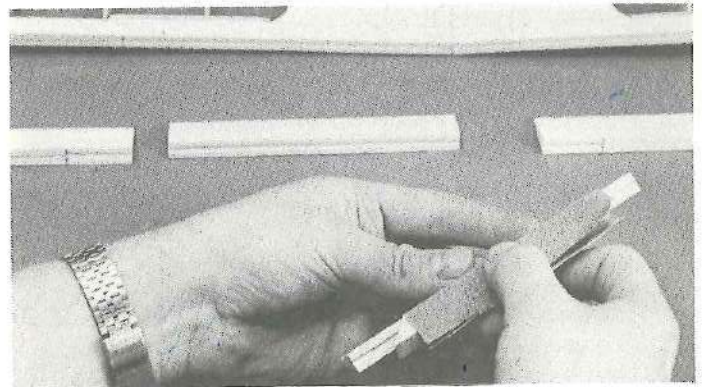
24c. Make one aileron horn as shown above. Hold wire so bottom of gauge is horizontal. Firmly grasp $\frac{3}{8}$ " of wire at UNTHREADED end (see above) and bend wire horizontally 90° . Check on table, and adjust as necessary. Wire should rotate easily in tube; binding between wire bend and tubing may be relieved by shortening tubing slightly.



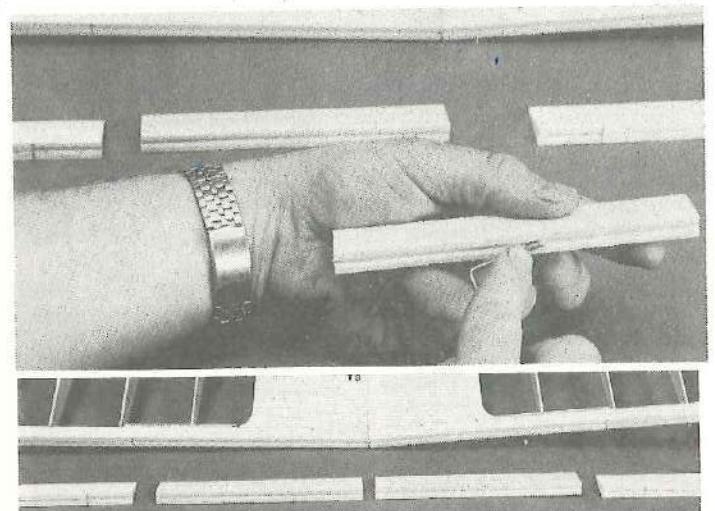
24d. Make 2nd aileron horn opposite to first one by bending $\frac{3}{8}$ " end as shown.



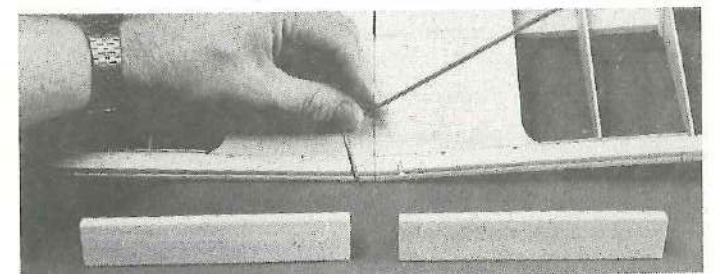
25a. Using Center-Line Marker, make a center line along entire lengths of T.E., inboard section, and ailerons.
 Mark each T.E. $7\text{-}\frac{1}{4}$ " from center joint.
 Mark front of ailerons $1\text{-}\frac{1}{4}$ " from inner ends.



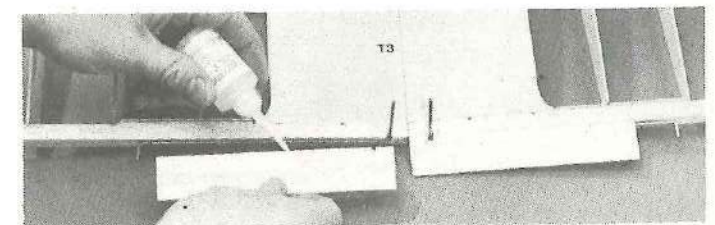
25b. Wrap sandpaper around a square-cornered block (engine bearer shown above) to make $\frac{1}{16}$ " deep grooves, $7\text{-}\frac{1}{4}$ " long in T.E., $1\text{-}\frac{1}{4}$ " long in ailerons, and full length in inboard sections, for both wing halves.



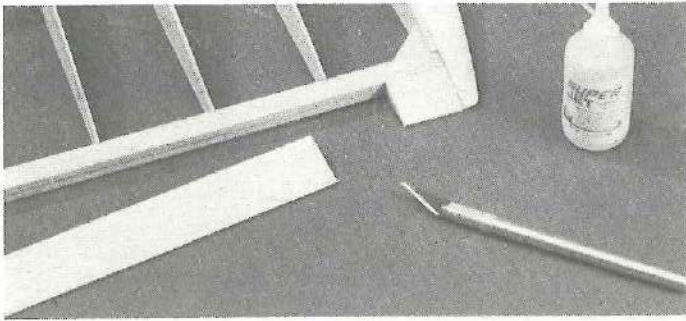
26. Using the threaded end of an aileron horn, file the grooves to a rounded shape so half of the nylon tubing will lie recessed in both the aileron and the T.E.



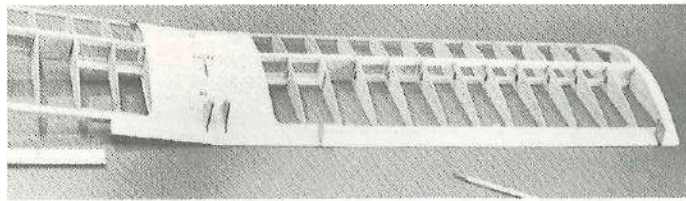
27. Using threaded end of aileron wire as a file, make two clearance slots $\frac{1}{2}$ " from center joint in wing T.E., and $\frac{1}{2}$ " from inner ends of T.E. inboard sections.



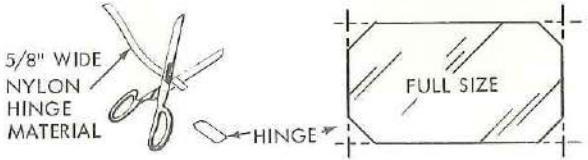
28. Using NO GLUE AT FIRST, temporarily place horns in wing grooves, position both T.E. inboard sections and check for horn movement — top to move about $\frac{3}{4}$ " total fore and aft.
 Remove T.E. inboard sections, and carefully glue horn wire **tubing** and T.E. inboard section in place (CAUTION: keep glue off wires).



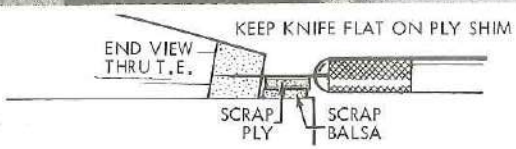
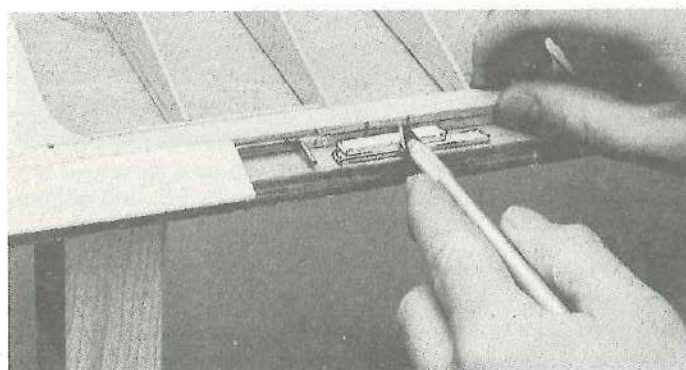
29. Cut 1-1/4" off wing tip end of ailerons, and glue to T.E., flush with end of T.E. as shown above.



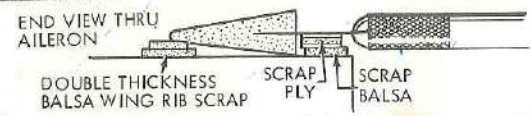
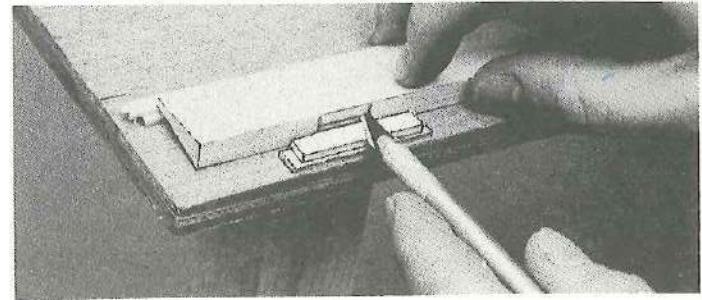
30. Position ply horn angle gauge at threaded end of one horn wire, slowly press aileron on other (3/8" long) end of wire to make a mark. With a small nail, make a hole for the wire. Work carefully, keeping hole centered inside aileron. Repeat for other aileron.
 So aileron ends don't fit "tight" after everything gets covered, gently sand both ends of each aileron. The clearance is correct when you can fit each aileron in place with a piece of matchbook cover at both ends as shown above.



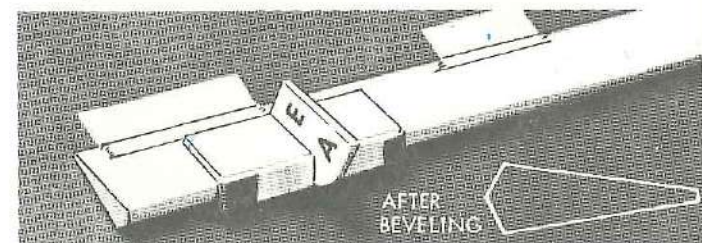
31. From nylon hinge material provided, cut six hinges to angular shape shown above. Place T.E. and aileron on plan, and mark hinge locations.



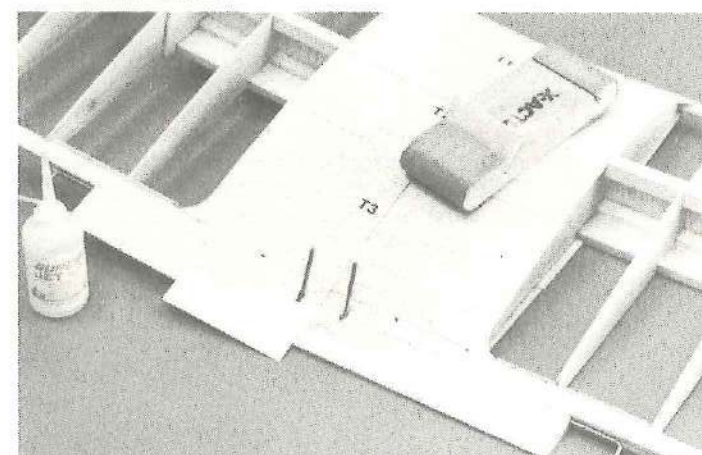
32a. Make a double thickness shim as shown above using **one piece** of scrap balsa from a wing rib sheet and **one piece** scrap ply from a fuselage sheet (DO NOT use plywood from Engine Breakaway Plate sheet for this shim — It is too thick!) Cut hinge slots as shown above.



32b. Set aileron close to table edge, support thin edge of aileron with two thicknesses of wing rib scrap as shown in sketch; and make hinge slots using balsa & ply shim from previous step. Repeat slotting for other aileron.



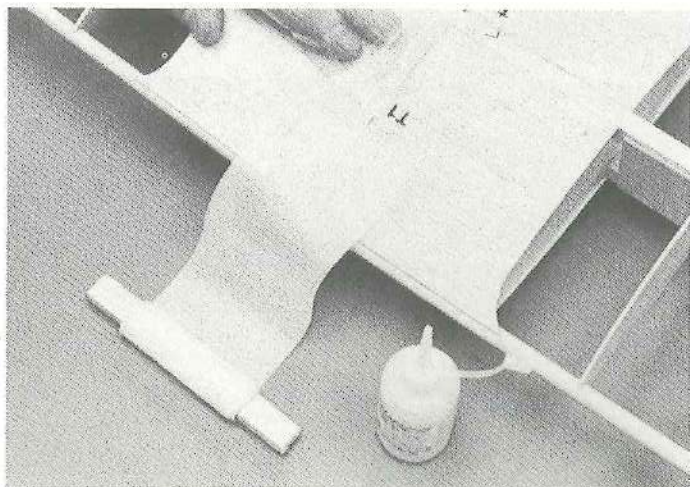
33. Using beveling tool "EA", bevel front edge of aileron to centerline. Turn aileron over and repeat sanding. Repeat for other aileron.



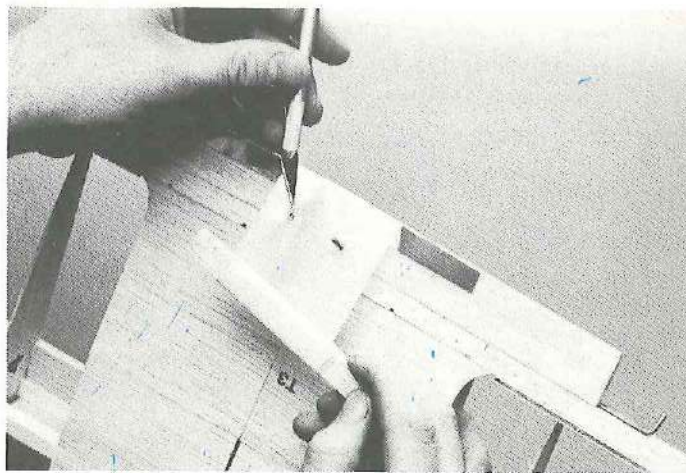
34. Using 240 grit (fine) sandpaper, flat sand entire wing to blend surfaces and remove high spots.
 Cut 1" x 6" half-hard aluminum sheet into 3" pieces. Lightly sand aluminum surfaces for better gluing. Apply a bead of SUPER JET to half of a 3" aluminum sheet and glue it to wing T.E. as shown above. When dry, apply glue to other half and then wrap it around T.E. Repeat for other 3" piece.



35. Glue one end of 2-1/2" wide nylon fabric to scrap wood. Let dry until the nylon is **glued solidly** to the balsa. Then roll up nylon on to wood.

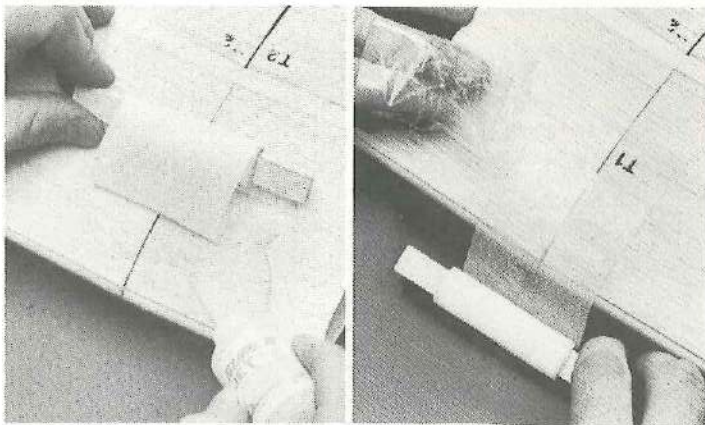


36a. Apply a line of SUPER JET across center joint on wing top and stick one of 2-1/2" wide nylon to it. Let dry until the nylon is **glued solidly** to the balsa.



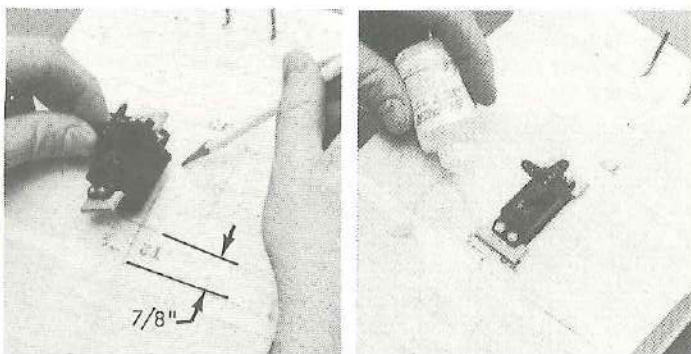
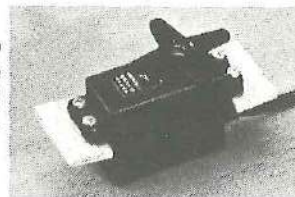
where you started on wing top.

After entire center joint has been wrapped with nylon, apply another coat of glue and force it down through the nylon. Let dry thoroughly.



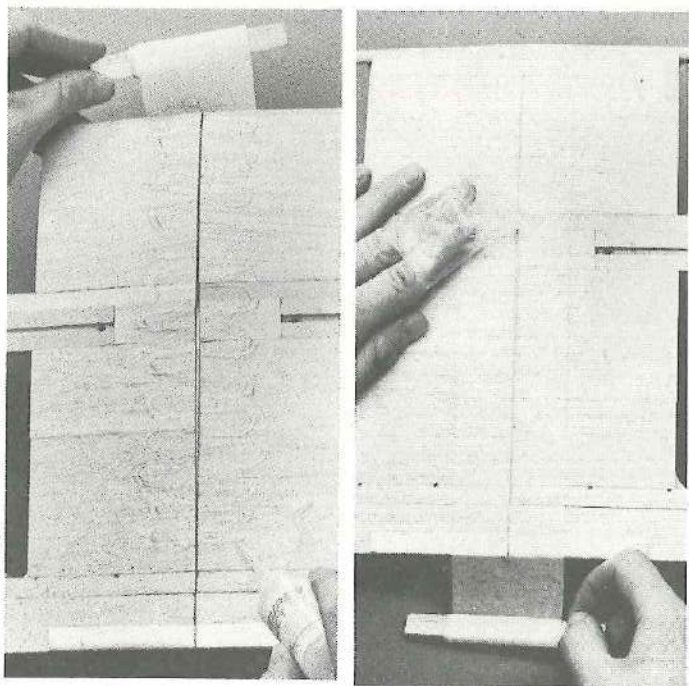
36b. Apply a squiggle of glue to wing and pull nylon fabric *down* into it. Rub nylon into glue with your finger (cover finger with plastic bag or similar).

37a. Temporarily mount servo on die-cut rails. See fuse side view on plan for added details of aileron servo installation.



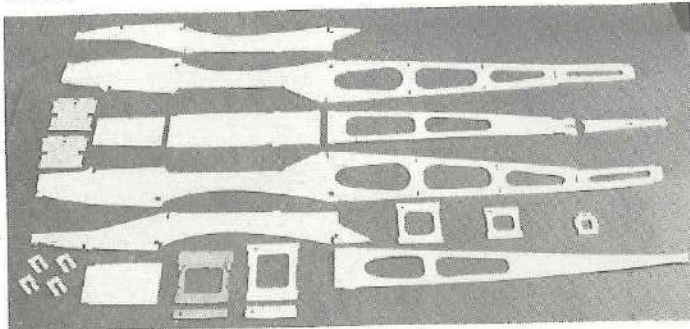
37b. Carefully position servo $\frac{7}{8}$ " behind top spar and mark size for opening.
 Cut-out top sheeting as required to suit your servo.
 Glue servo rails to wing, and fill any gaps under the rails with slivers of scrap balsa. Avoid getting glue on servo!

THIS COMPLETES THE WING CONSTRUCTION — THE SERVO SHOULD BE REMOVED BEFORE COVERING.

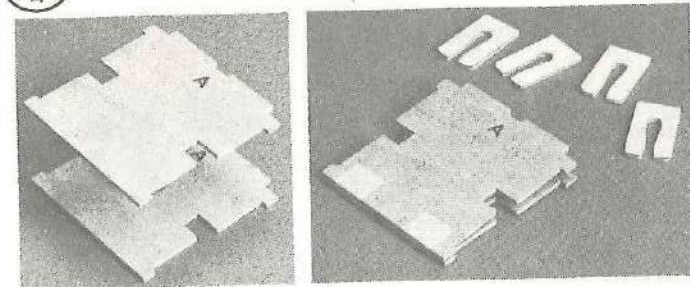


36c. Repeat gluing procedure and apply nylon around L.E., bottom of wing, around T.E. and finally overlapping

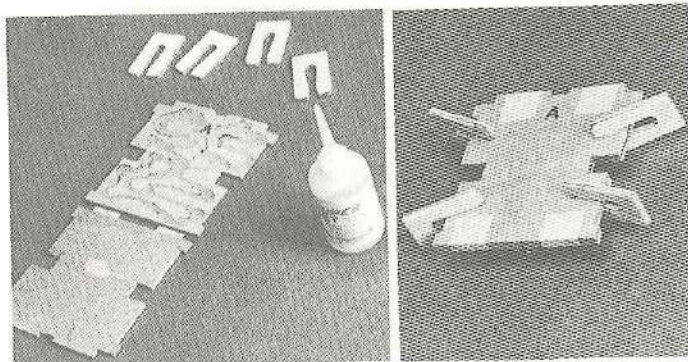
III FUSELAGE ASSEMBLY



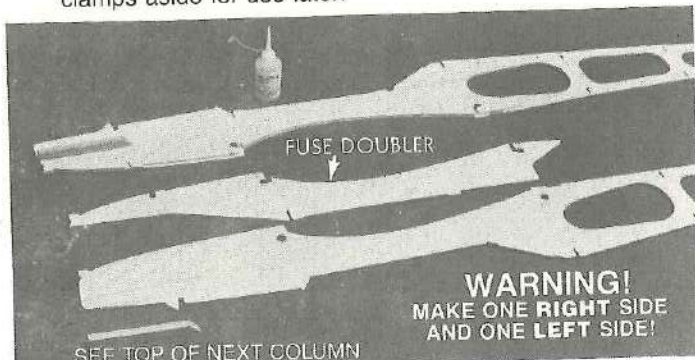
- Carefully remove all fuselage (fuse) parts from die-cut plywood sheets. Lightly sand any rough edges.
 - For bolt-on wing, do not remove die-cut holes for wing dowels in sides and doublers; glue them in place.



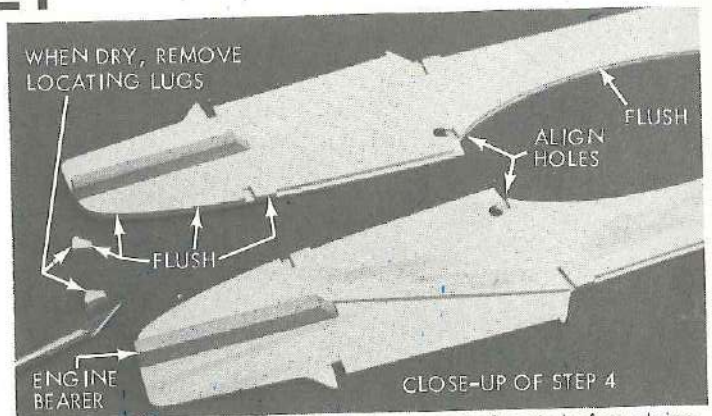
- With side stamped "A" facing up, position two 1/8" ply formers (firewall) together, matching all edges. To hold them in alignment, tape them securely together along one edge as shown at right. Have four ply clamps ready for next operation.



- Open firewalls and apply a liberal bead of glue to one part as shown at left.
 - Keep edges aligned as you close firewalls and tape opposite edge together. Squeeze firewalls together using die-cut clamps. When dry, remove clamps and tapes; set clamps aside for use later.



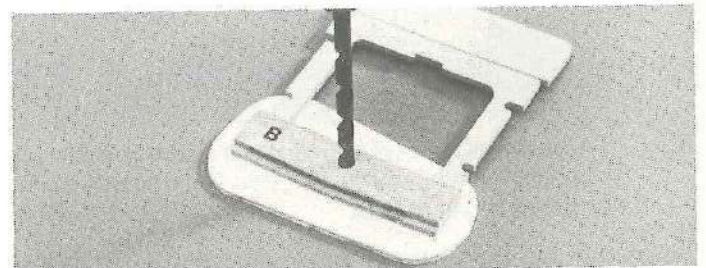
- Be sure sides are laid down **left & right** as shown.
 - Temporarily position doublers and engine bearers on



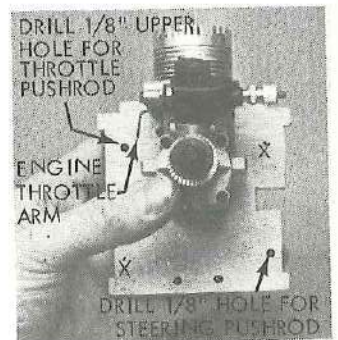
- fuse sides. Check fit and placement of parts before gluing.
 - Glue doublers to fuse sides, making sure to flush parts as shown above. When dry, cut locating lugs off.
 - Glue engine bearers solidly to fuse sides and edge of nose doublers (**longest edge** to be glued to fuse side).



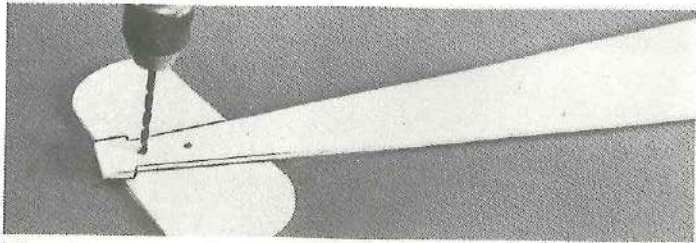
- Using no glue, position former doublers "B" and "E" on formers "C" and "D" as shown above (Note: doublers are angled on bottom side—they are not symmetrical). Flush top of doublers with former openings and lugs at former sides. Glue doublers to formers.



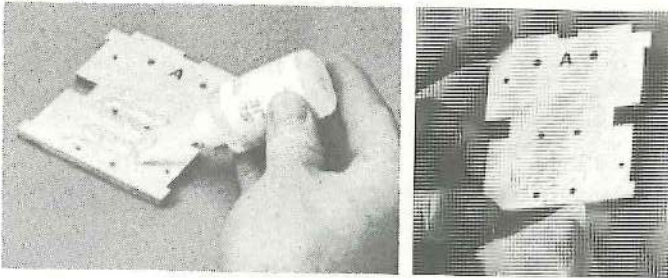
- For bolt-on wing, drill 1/4" diameter hole at punch mark location through former "BC".



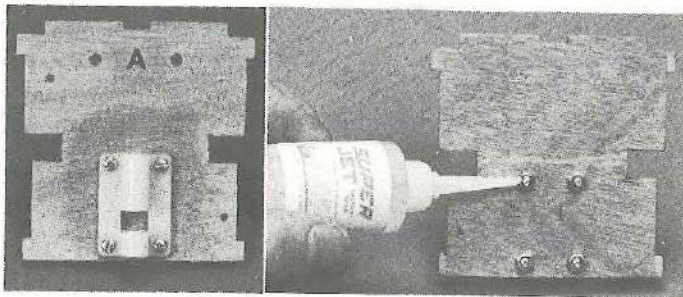
- Drill two 1/4" diameter holes through firewall at upper punch mark locations as shown above (place scrap wood under backside while drilling to avoid split-out).
 - Drill four 1/8" diameter holes through firewall at four lower punch marks.
 - Study engine above; most engines have throttle arm on the side shown, and require two more 1/8" holes to be drilled as indicated for throttle and steering pushrods. If your throttle arm is on the opposite side, use the opposite locations shown with an X.



- 5b.** Drill two $\frac{1}{8}$ " diameter holes through fuse bottom at two rear punch marks.

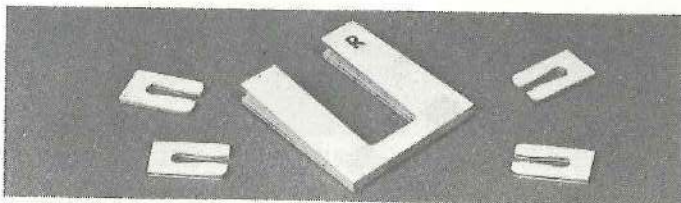


- 5c.** To prevent oil penetration, seal area around four holes by applying a bead of SUPER JET and smearing it into the wood with your finger wrapped in plastic bag.

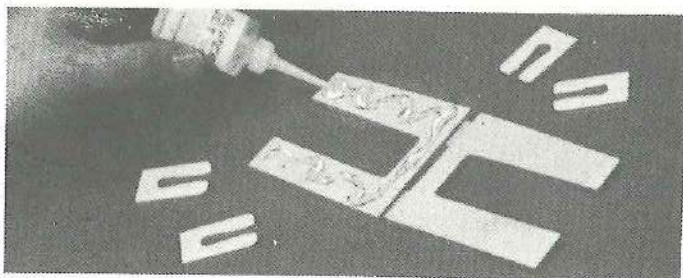


#4-40 x 1/2" MACHINE SCREW NUT

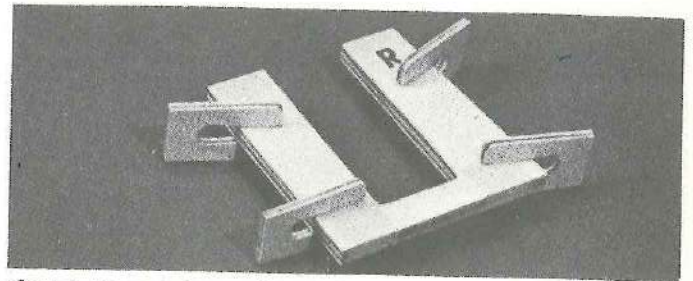
- 6.** Install nylon nosegear bearing on firewall using #4-40 x $\frac{1}{2}$ " machine screws and nuts as shown.
 Place a drop of SUPER JET on nuts to lock them in place.



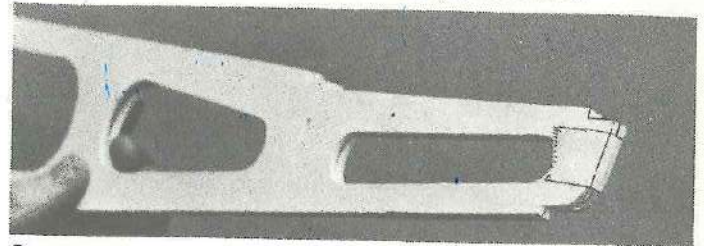
- 7a.** Position two $\frac{1}{8}$ " ply breakaway plates together, matching all edges including center cut-outs. To hold them in alignment, tape them securely together along one edge as shown.



- 7b.** Open plates, and apply a liberal bead of glue to one plate as shown.



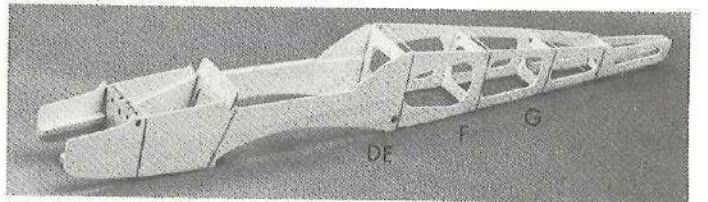
- 7c.** Keep edges aligned as you close plates and tape flanges together. Squeeze plates together using clamps. When dry, remove tapes and clamps. Set aside.



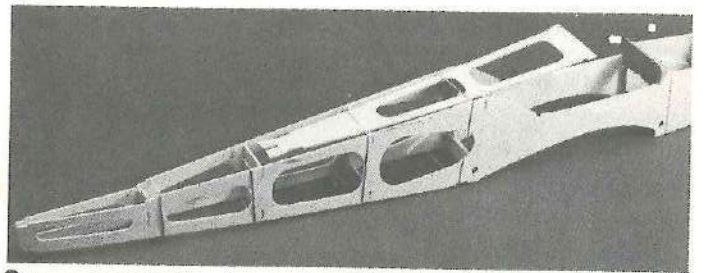
- 8a.** Place fuse sides one on the other, and tape rear together around the back end. Spread fuse front apart, and plug



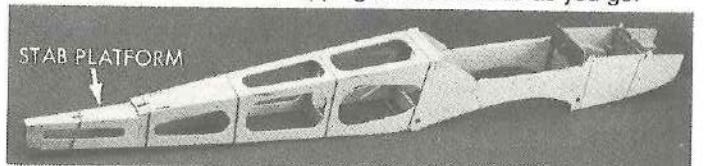
former "BC" into holes in body sides. Hold parts together with a rubber band. Carefully spread fuse rear open, plug former "H" in place, and hold with a rubber band. Remove tape from tail end.



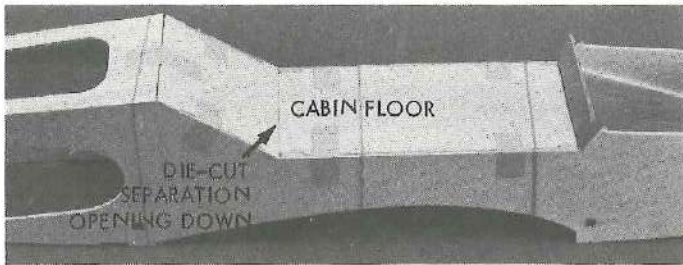
- 8b.** Install firewall & remaining formers "DE", "F", and "G" in same manner, using rubber bands to hold parts.



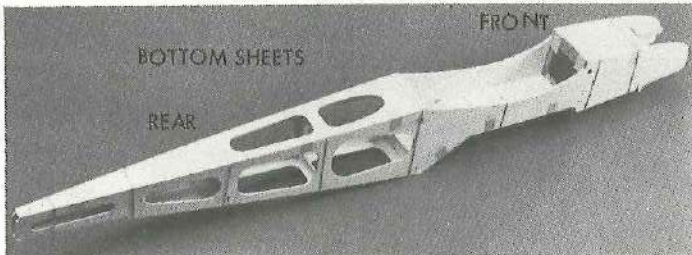
- 8c.** Insert top sheet under rubber band at former "DE", and work it towards tail, slipping it under bands as you go.



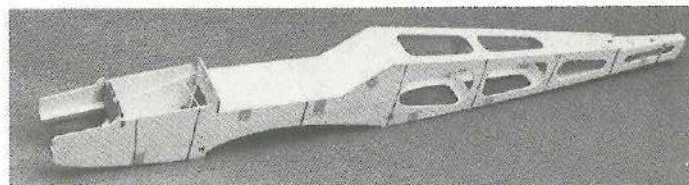
- 8d.** Lock tabs at both ends of top sheet into corresponding notches in fuse sides.
 Position stab platform between fuse ends, and hold parts in place with tape or rubber bands.



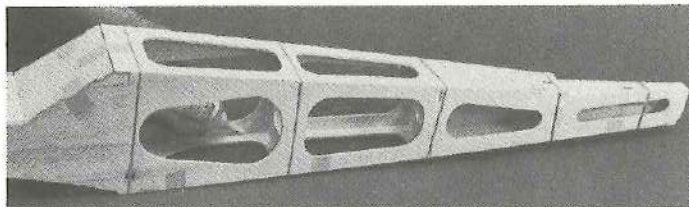
8e. With die-cut separation opening down, install cabin floor, locking tabs into corresponding notches. Tape in place.



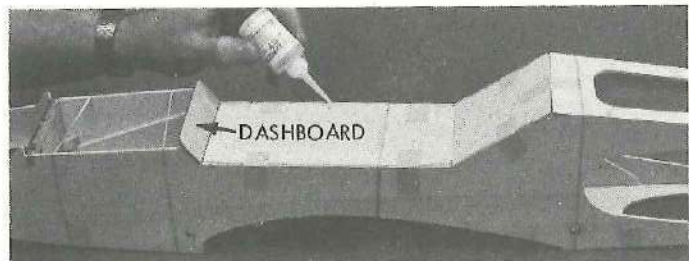
8f. Position front and rear bottom sheets in same manner.



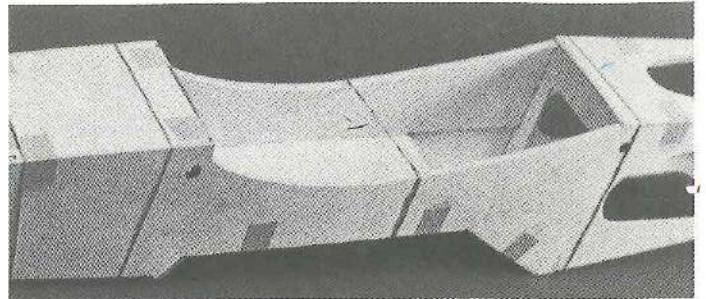
9. Place fuse over TOP VIEW on plan sheet. Viewing from above, carefully align the fuse to match plan outline. If an area of the fuse is off, adjust that portion in the direction required. Tape parts to hold in position.



10a. When satisfied with alignment, permanently glue sides, formers, and sheet parts in place. Apply a bead of SUPER JET along all joints inside and outside, or from both sides in the case of formers—it will penetrate the joint and leave a slight reinforcing fillet.

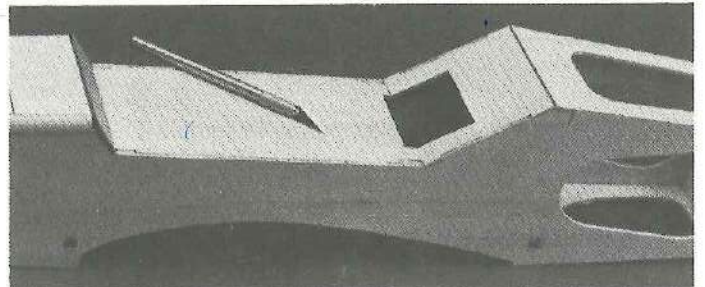


10b. Bend top of former "C" (dashboard) forward against slant in fuse sides. Glue in place.
 Glue cabin floor in place, and remove tape.

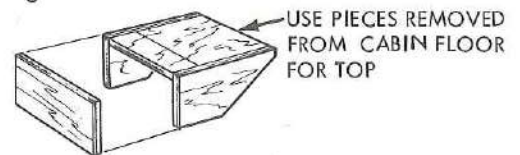


10c. Bend bottom sheeting at wing cut-out to conform with dihedral angle in formers "BC" and "DE". Tape and glue.

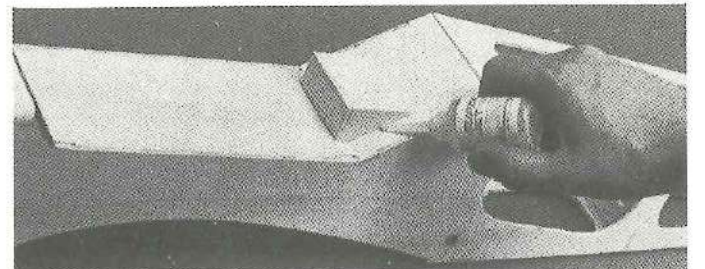
11a. Refer to page 28, Item 4 "SERVO ARRANGEMENT", and consider if you want to mount your servos "2 + 1" or "3-abreast." If using "2 + 1" mounting, complete the rest of this step as shown below. For "3-abreast", proceed directly to Step 12.



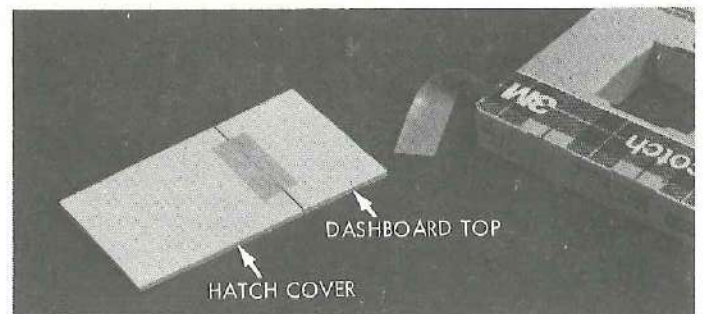
11b. There is a partially die-cut opening in the cabin floor for the longer "2 + 1" servo arrangement. Complete die-cuts to make opening.



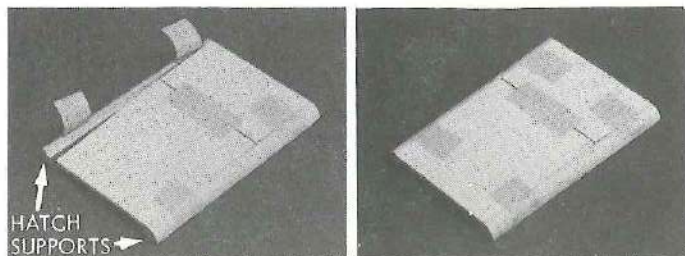
11c. Glue sides and front pieces to top as shown.



11d. Position servo enclosure on fuse and glue in place.

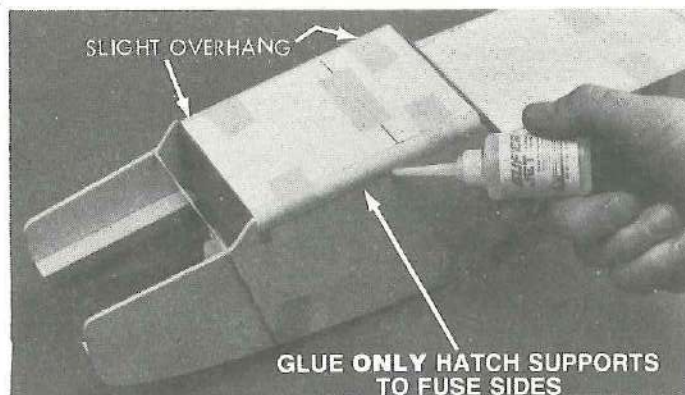


12a. Tape hatch cover and dashboard top together (as they fit from die-cut sheet).



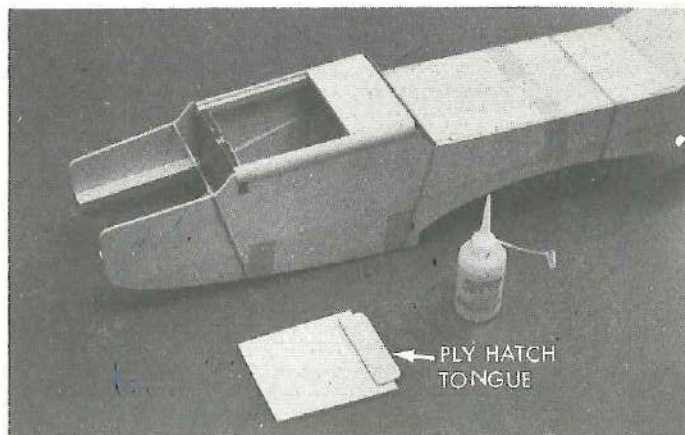
WARNING: DO NOT GLUE PARTS!

12b. Tape hatch supports to both sides



13. Position taped parts in place on fuse. Because of curvature, the hatch supports can overhang the sides slightly (the

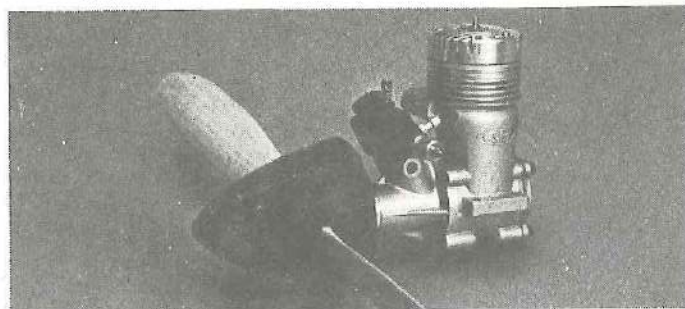
overhang to be sanded off later). Glue **only** the hatch supports to the body sides.



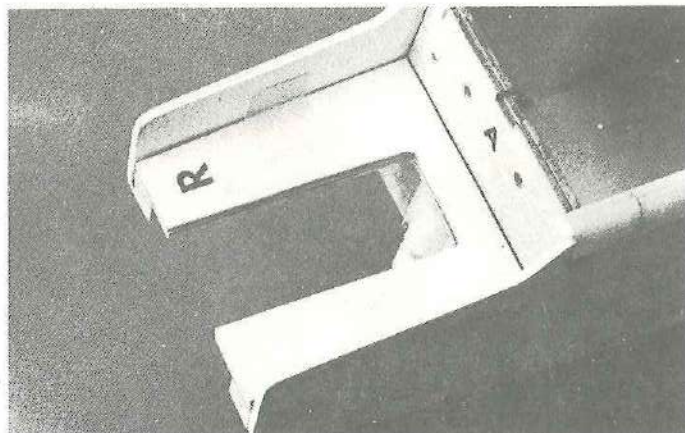
14. Remove hatch cover from fuse. Refer to plan for **correct** placement of ply tongue, then glue tongue to hatch cover. Try in place.
 Glue dashboard top to hatch supports and dashboard.

ENGINE INSTALLATION AND FUSE COMPLETION

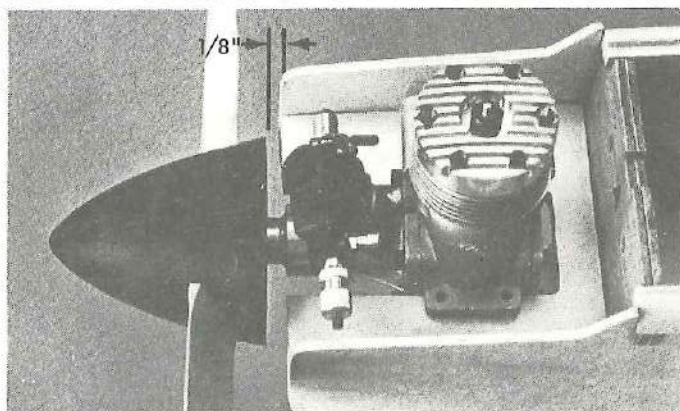
For clarity, the engine installation is shown in many small steps rather than a few general ones. It is not difficult — just thoroughly explained.



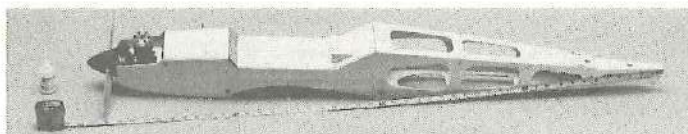
1. Mount propeller and spinner (if used) on your engine.



2a. Tape breakaway plate on engine bearers. **IMPORTANT:** The cut-out in the breakaway plate is purposely cut on an angle. The letter "R" on the breakaway **must** be on the Right side as shown. The "Right" side is thought of as it would be to a pilot sitting in the cabin.



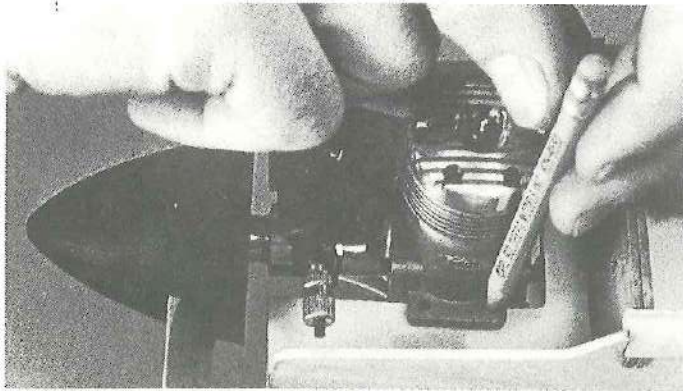
2b. Position engine on breakaway so there is approximately $\frac{1}{8}$ " between fuse front and spinner back (or propeller if spinner isn't used.) The opening in the breakaway plate is die-cut for popular .40 size engines. For larger engines, trim opening as required for engine crankcase clearance (see engine bottom view on main plan).



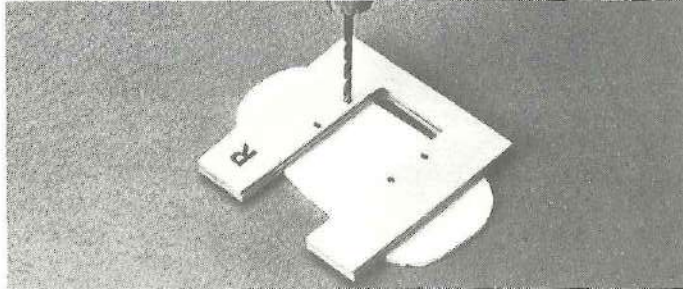
LEFT SIDE DISTANCE SHOULD BE $\frac{5}{16}$ " LONGER THAN RIGHT SIDE

3 Notice the engine in the top view on the plan is **angled slightly** to the right. This "RIGHT THRUST," although small, is important.

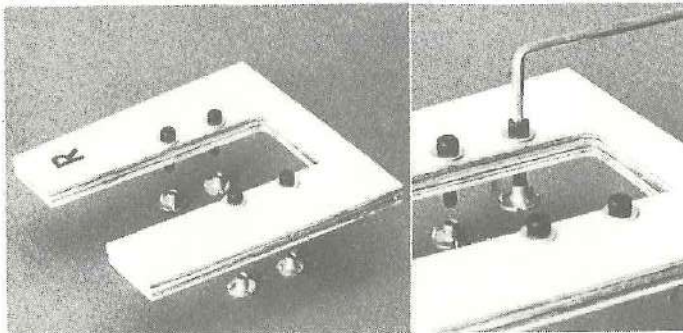
View your model from above, and carefully measure distance from tail end to one propeller tip (propeller must be horizontal). Then measure other side of model in same manner. **Left side** distance should be about $\frac{5}{16}$ " longer than right side. For example, if right side measures 46", left side should be $46\frac{5}{16}$ ". Add 2-3 drops of SUPER JET to hold engine temporarily in place.



4a. Mark straight down through engine mounting holes onto breakaway plate.



4b. Remove engine and breakaway plate from fuse. Drill four 1/8" holes through breakaway at engine mounting hole locations (place scrap ply under parts when drilling to avoid splintering.)

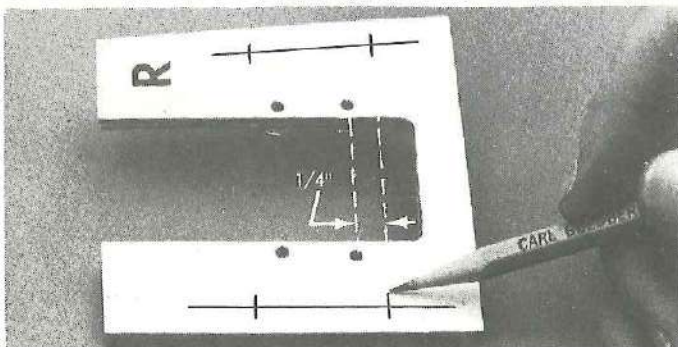


PULLING BLINDNUTS INTO PLACE USING SCREWS

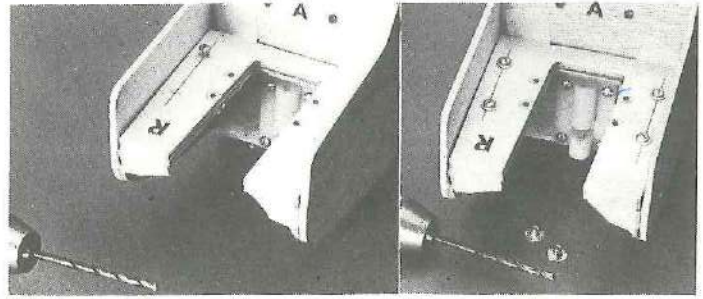



4-40 x 3/8" SOCKET HEAD SCREW WASHER BLIND NUT

5. Permanently install four blindnuts in **bottom** of breakaway using socket head screws (and washers) to pull blindnuts up into the screw holes as shown. Remove screws after seating blindnuts.



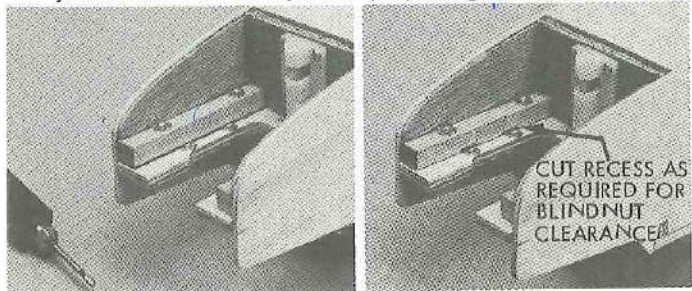
6a. On die-cut lines, mark cross lines about 1/4" ahead of and 1/4" behind holes as shown.



 4-40 x 3/4" MACHINE SCREW

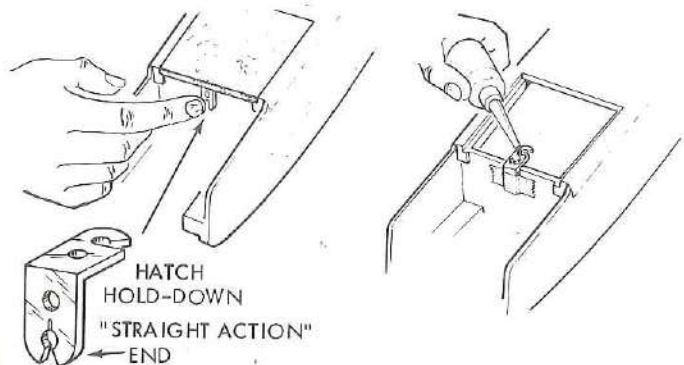
6b. Tape breakaway plate in position. At one of the locations marked in step 6a, drill a 1/8" hole straight down through it and engine bearer. Insert a #4-40 x 3/4" pan head screw through hole.

6c. Continue this procedure, one hole and screw at a time, until all four screws are in place.
 Draw blind nuts up into bottom of engine bearers (as you did for breakaway in Step 5) using #4-40 x 3/4" screws.



6d. This step is necessary only if you enlarged the breakaway plate opening in Step 3. Turn fuse upside down and check that breakaway plate blindnuts do not contact engine bearer. If they do (as shown in photo above) remove breakaway plate and cut blindnut clearance recesses in bearer. This is easily done using power cutting tool, small carving gouge, etc. The breakaway plate should make full contact on the engine bearers.

7. Remove breakaway from fuse.

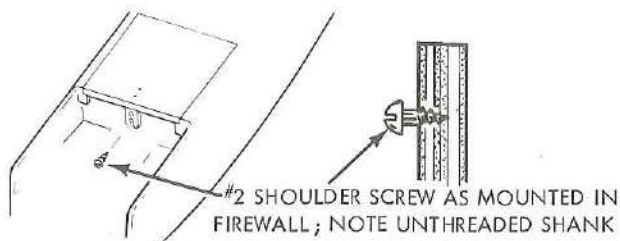


8a. Position hatch cover on fuse. Press hold-down against front of firewall and up against bottom of hatch cover as shown. "Straight action" end should point towards fuse bottom. Tape in position.

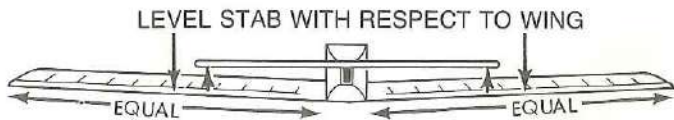
Remove hatch cover and apply SUPER JET to hold-down. Replace hatch on fuse, gluing it to hold-down. Let dry.



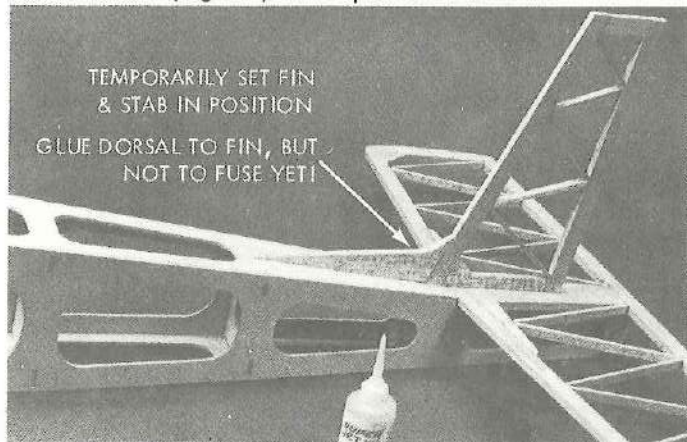
8b. Secure hold-down to hatch with two #2 x 3/16" screws.



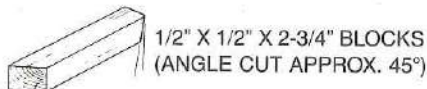
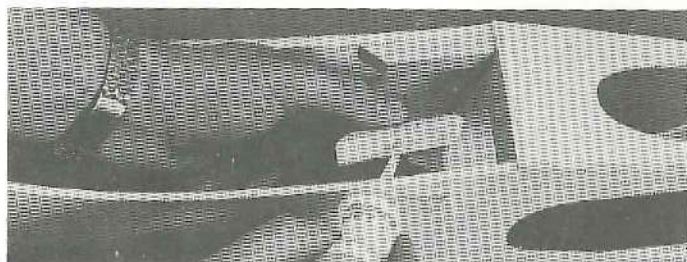
- 8c. Set hatch in position on fuse. Mark location as shown for #2 shoulder screw. Install screw in marked location, exposing enough unthreaded shank to engage hold-down. Snap on and off several times.



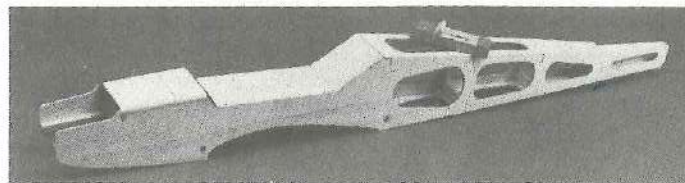
- 9a. Temporarily install wing hold-down dowels in fuse. Rubber band wing in place on fuse, making sure it is centered. Viewing model from rear, see if stab sets level with respect to wing.
- Sand stab platform area as may be necessary to provide a good level fit for stab. Do not alter the die-cut angle of the fuse sides.
- Center stab on fuse, measuring to obtain equal distance from side to side, and from nose of fuse to rear corner of each stab tip (see dimension "C" at right side of page 26). Pin in place.



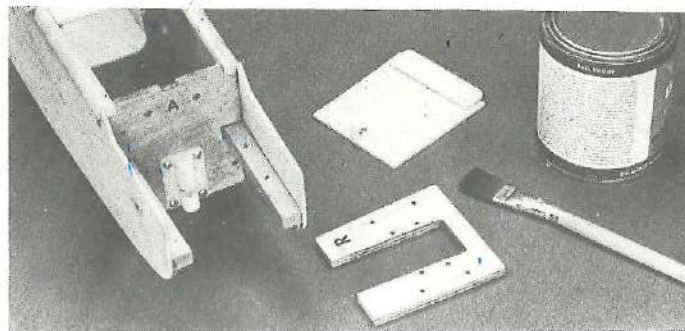
- 9b. Trial fit fin in place. Glue dorsal fin to main fin but not to fuse, as shown. When dry, watch grain and very carefully trim off die-cut bumps. Finish sanding.



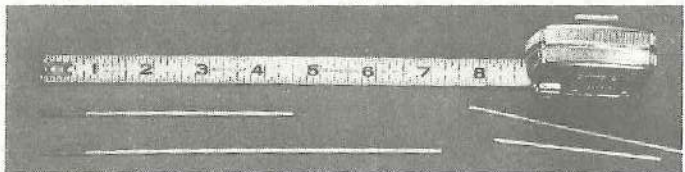
10. From 1/2" hardwood (not furnished), cut two bolt-mounting blocks using dimensions given above. Glue blocks firmly to fuse sides and former "DE", making sure to flush blocks even with wing saddle. **LET DRY THOROUGHLY!**



11. Flat sand fuse and round off corners, except in the following areas: **top** of tail mounting area, and **wing saddle** — repeat: do not sand **these** areas, except very lightly to remove burrs!



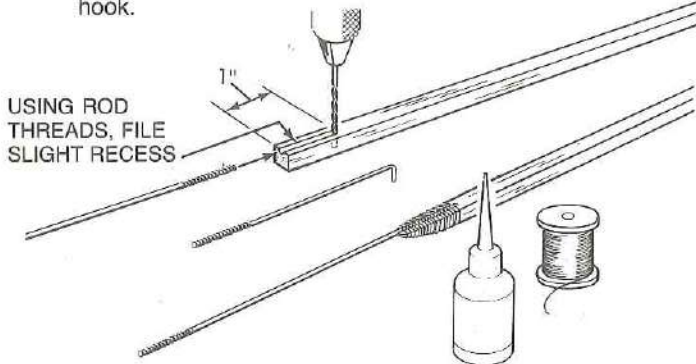
12. To protect the engine and tank areas from becoming oil soaked, they need to be "fuel-proofed." Either polyurethane enamel, SUPER JET, or epoxy, is good for this. Polyurethane is available in colors so you can match close to your color scheme.
- Apply your fuel-proofer to **entire engine area and breakaway plate**, inside tank compartment, and bottom of hatchcover. Open up screwholes with toothpick while paint is wet. Let dry thoroughly.



- 13a. From the **threaded** end of two 10" rods, measure and cut one of the rods to 7" and the other rod to 4 1/2".



- 13b. At cut end of rods, bend down about 1/4" making a square hook.



- 13c. Using the threaded end of a rod, file a slight recess 1" long at one end of each 5/16" square x 24" balsa pushrod.
- Drill a 1/16" diameter hole 1/4" deep at end of recess in both pushrods.
- Glue rods into balsa pushrods as shown.
- When dry, taper ends of pushrods and round off corners. Bind with strong thread, coat with glue and let dry.

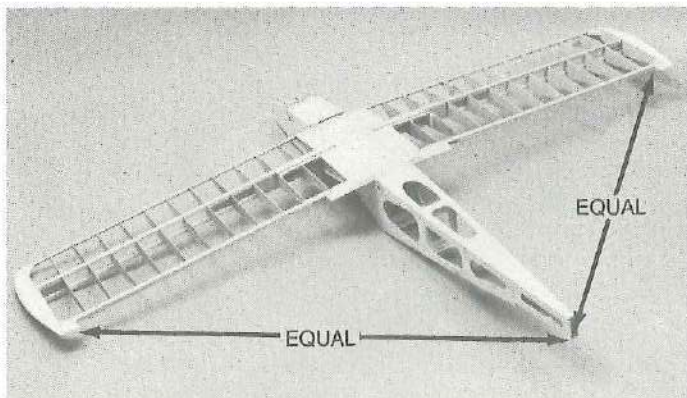
Continued on next page

- 13d. Read this instruction carefully. Complete the other end of the pushrods as follows: for the 7" rod, cut its balsa pushrod to about 15½" long; for the 4½" rod, cut its balsa pushrod to about 20" (refer to full-size views on plan).

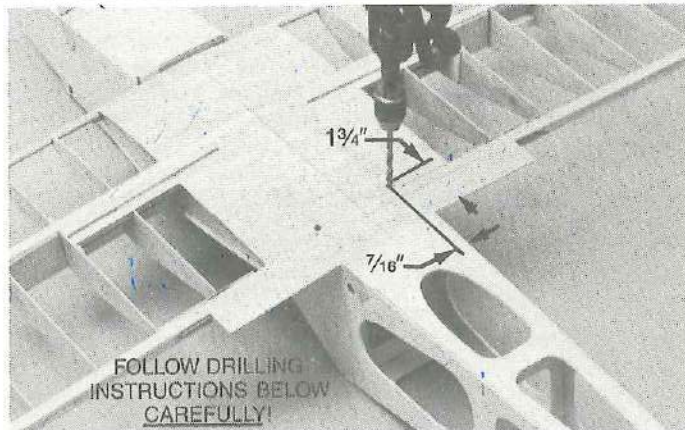
- 13e. Cut ¼" x 12" plain wire in half. Attach these wires to the balsa pushrods by repeating the procedures in steps 13b and c.

THIS COMPLETES THE FUSELAGE ASSEMBLY

ALIGNING & DRILLING FOR BOLT-ON WING



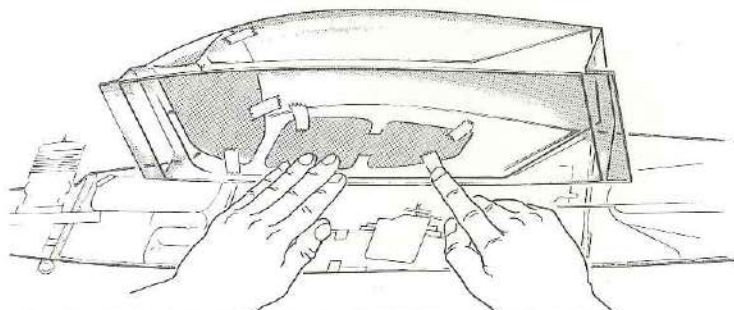
1. Set wing in place on fuse, then check and adjust until wing tips are equidistant from rear end. Tape wing on fuse.
 Tape wing on fuse.



2. Measuring carefully 1¾" from wing T.E. and 7/16" in from fuse sides, drill two holes 13/64" or 7/32" dia. down through wing and bolt mounting blocks.
 Remove wing from fuse, and tap fuse mounting blocks for ¼" x 20 thread.
 Enlarge **WING HOLES ONLY** to ¼" dia.

CANOPY PAINTING

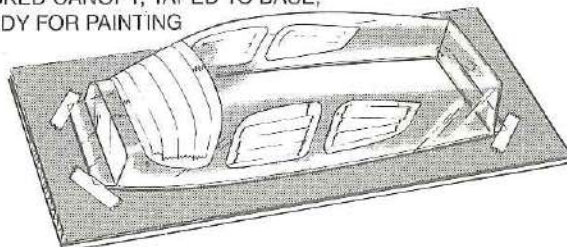
For home-built version, proceed directly to COVERING IV. To finish your model in the 4-place version, the canopy should be painted now so that it will be thoroughly dry when it is time to glue it in place on the fuse. Carefully follow Steps 1 to 4 below.



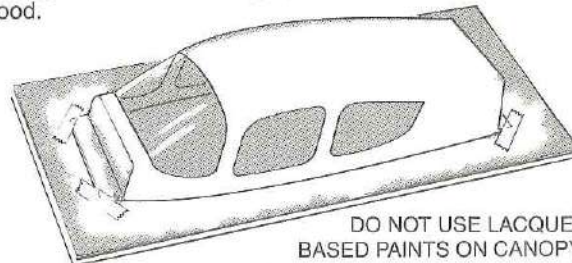
CUT OUT WINDOW TEMPLATES AND TAPE INSIDE CANOPY

1. Carefully cut off scrap plastic at **sides** of canopy **only** (see sketch above); do not cut front or rear.
 Cut out windshield and side window templates from 8½" x 11" template sheet. Position windshield template **inside** canopy, matching bottom of template with bottom of canopy windshield, and template "centerline" with marked line on canopy. Tape in place.
2. Lay canopy on its side, aligning it carefully over side view on plan, then taping to hold position. Place one side window template **inside** canopy, align it with side windows on plan, and tape to canopy. Remove and reposition canopy on "Auxiliary Canopy Side View" at center of plan, and tape remaining window template in place.
 Clean outside of canopy using soap and water; this will improve paint adhesion. Dry it thoroughly.

MASKED CANOPY, TAPED TO BASE, READY FOR PAINTING



3. Carefully mask outside of canopy to match with window templates inside. Round corners are easily made with narrow strips of "vinyl" type masking tape or by simply cutting corners out of larger pieces of masking tape. Make sure all surfaces to be windows are completely masked. Using your fingernail, press all masked edges firmly to canopy. Tape canopy at front and rear edges to a sheet of flat cardboard or wood.



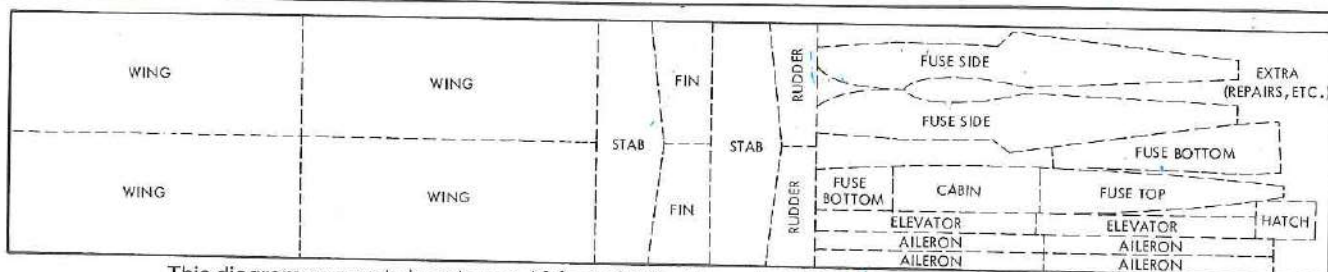
DO NOT USE LACQUER BASED PAINTS ON CANOPY!

4. Apply a coat of clear to all masked edges to prevent color coats from penetrating underneath. Polyurethane spray paint is recommended, but good results can be obtained with carefully applied brushed paint (**do not** use lacquer-based paint). Read instructions on paint can, and follow them. The first color coat should be applied very lightly, so it will appear almost transparent. Do not try to cover completely in just one coat, or the paint will run! Repeat applications, gradually building up color density while allowing time between coats as specified by the paint manufacturer. Let final coat set a bit, then remove the masking tape carefully. Remove canopy from your work area so it can dry free from dust or other damage.

IV COVERING

GENERAL. A good covering job should be preceded by careful sanding, filling nicks and dents, then more sanding. Use filler appropriate for balsa. Any irregularities in the wood surface will show on the covering, so a smooth sanding job is a must for good appearance. For final sanding, use fine sandpaper (grade 240 to 320) and a sandpaper block.

The SKY TIGER should be covered with **strong** films. Ask your dealer's recommendation. The following instructions show how to cover the model in two color schemes, one typical of a home-built, the other a "4-place" executive plane. The 4-place scheme is somewhat more difficult because it requires carefully splicing two colors of covering together. Engine exhaust often affects details such as door striping, etc. Careful applications of Instant Jet along the edges will hold them securely in place.



This diagram suggests how to use 12 feet of 26" wide material to cover your model in **only one color** (with generous scrap allowed). Other schemes with more than one color will each require a different layout for material cutting.

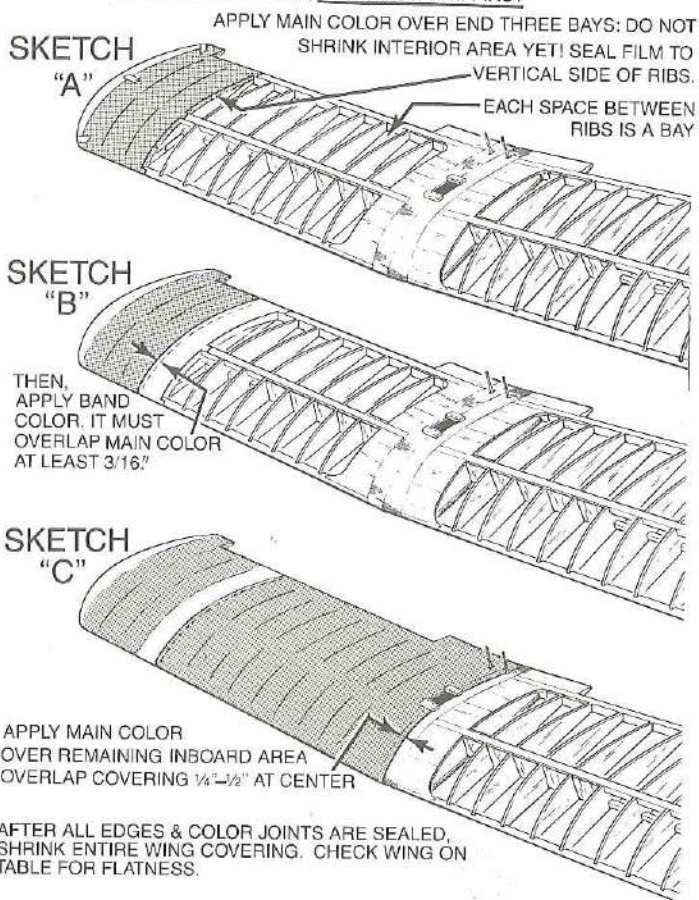
IMPORTANT-READ BEFORE COVERING

ADHERING COVERING TO WING TIPS. To prevent deforming of the plastic wing tips by the hot covering iron, we recommend gluing the covering to the tip with Regular Jet (or similar "thin" cyanoacrylate). Jet is simply applied at the edge of the covering, and it seeps in under and neatly adheres the covering to the tip. Super Jet (or similar) can be used instead of Regular Jet, but must be applied very carefully to avoid smearing. To use it, the edge of the covering is pulled up and minimum glue applied, then the covering pressed back in place.

COVERING THE WING

- Using a fresh razor knife or blade, cut a piece of covering 1" larger in each dimension than the area of the **end three bays** of the wing bottom (For a solid color wing with no bands, cut covering 1" larger in each dimension than entire one-half of the wing bottom). Be sure to cut the wing tip edge of the covering with a **straight edge**. Align the straight edge cut of the covering so it overlaps the plastic tip 1/8". Tape the covering to the tip in several places—be sure it is pulled flat with no wrinkles! Examine rest of covering to be sure it covers entire three bay area of wing (see sketch "A").
- Carefully apply Jet at the edge of the covering, tilting the wing if necessary to run the glue along the joint.
- Using iron, tack covering to perimeter edges of the panel, gently pulling out the main wrinkles as you go.
- Seal all around edges of panel. Besides sticking the film firmly to the third rib in from the end of the panel, run some of the film down the vertical side of the rib. **Do not** shrink film tight!
- From your band color covering, cut a 3" wide band about 13" long. Apply it, making sure to overlap the main color enough so that it adheres firmly (see sketch "B").
- Cut and apply main color covering for remainder of wing to center (see sketch "C").
- Glide iron over interior to tighten covering. Seal covering to all ribs. Trim edges.
- Following same procedure, cover entire bottom, then top. Immediately go back and slit covering to open aileron hinge slots while the locations are still fresh in your memory. See plan for help in locating slots.
- Cover the ailerons in same manner, first the bottom, then the top, overlapping the covering around the edges.

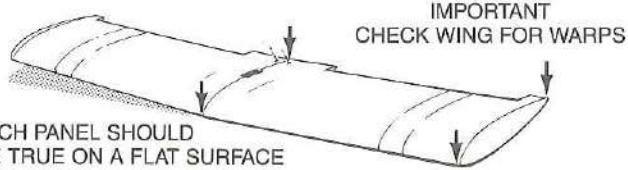
COVERING WING WITH A BAND DESIGN—
TOP OF WING SHOWN; COVER BOTTOM FIRST



- Apply 1/4" CG Color-Stripe Tape to finish wing trim (color to suit your scheme).
- For added realism, apply a wing walk made from scrap of black covering; or mask, lightly sand, and paint it on (polyurethane recommended). See box label pictures for approximate size and placement.

TRUING WING

Truing the wing is an important step, and should not be rushed or omitted.



EACH PANEL SHOULD LIE TRUE ON A FLAT SURFACE

- Set one half of wing on a flat surface to detect warp. To counter any warp found, twist panel slightly in direction opposite to warp, and hold position while gliding iron over covering to re-tension structure. Repeat process until panel is true.
- Follow same procedure with other half of wing.

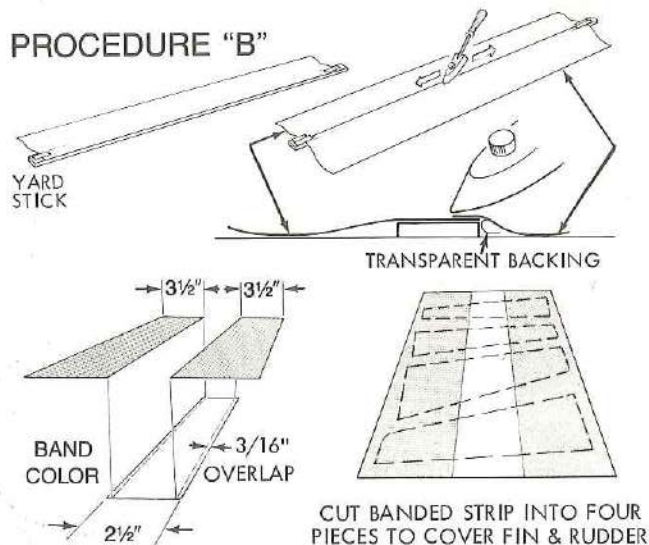
COVERING THE TAIL

Following same procedure as the wing, cover the stab/elevator and fin/rudder. After covering over hinge slots, go back and slit covering to open slots while the locations are still fresh in your memory. Applying the color bands on the tail as shown on the box label photos can be done in either of two ways. The simplest way is to apply the color band directly over the covered part (stab, fin, etc.)—see procedure "A" below. However, this method should not be used for light over dark colors because the dark covering will show through the band. When adhering the color band to the main part, you must work carefully to avoid trapping air bubbles. To avoid this, a better way is shown in procedure "B". And although it's not difficult, it does require careful splicing.

Procedure "A". First, complete covering the fin and rudder in main color. Then cut three 2" wide X 7" long strips of band color. Set your iron to a lower heat setting, and apply bands on fin and rudder. Tack edges first, then seal center and work outward carefully to avoid trapping air bubbles. Remove any air bubbles by first piercing them with a pin, and then smoothing with iron. Cover stab and elevator in same manner.

Procedure "B". Cut a strip of your band color 2-1/2" wide X 18" long, and cut two strips 3-1/2" X 18" of main color. With protective film facing down, check one edge of band strip with straight edge, and tape ends in place (see sketch below). Remove protective film from one main color strip, and lap the main about 3/16" over the edge of the band. Tack together in many spots, then use the tip area of the iron to bond them in a good seam.

PROCEDURE "B"



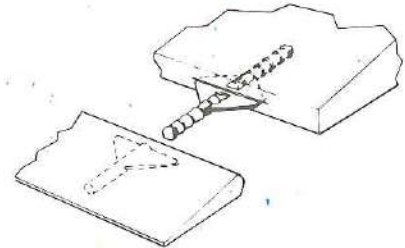
Repeat procedure to opposite edge of strip. Cut this banded sheet into four pieces to cover fin and rudder—check placement of band so it will appear level relative to wing. Cover dorsal fin.

Cover stab and elevator the same way, using wider pieces of main color.

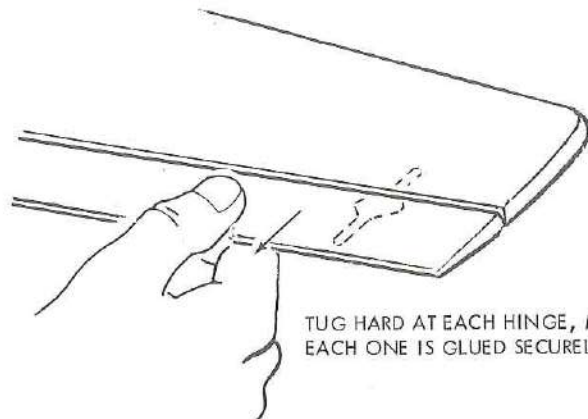
INSTALLING HINGES

IMPORTANT! Read and follow hinging instructions carefully. All hinges must be firmly glued in place. Loose hinges can allow a control surface to fall off, resulting in a crash! Tug hard on each hinge to check bond.

The procedure is to first glue the hinges into the major parts (the wing, stab, and fin), and then add the control surfaces. Because hinge installation requires time for inserting and adjusting each hinge, quick setting SUPER JET is not recommended here. Instead, use epoxy, aliphatic resin, or equivalent glue.



- Hinge elevator to stab. When dry, tug hard on each hinge to check bond.

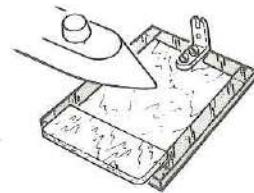
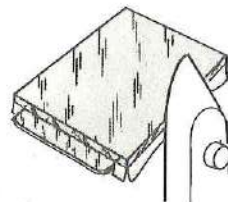
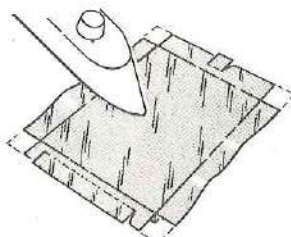
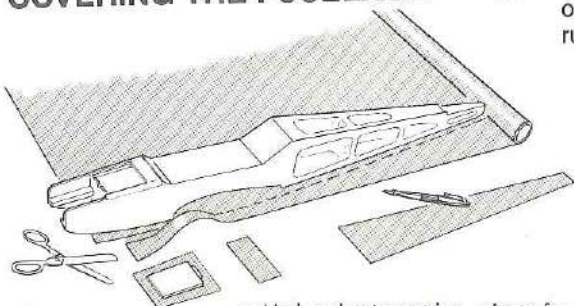


- Hinge rudder to fin.
- Hinge ailerons to wing

IMPORTANT: When hinging ailerons to wing, be sure to glue strip aileron horn wires into ailerons, but **DO NOT GLUE** ailerons to nylon tubing!

COVERING THE FUSELAGE

1. Use gray covering on the cockpit floor, and flat black on the hatch, dashboard top, and dashboard (gloss covering can be dulled by rubbing it with 000 steel wool).



2.

a Mark and cut covering pieces for fuse. Cut pieces from proper color MonoKote as they relate to your color scheme.

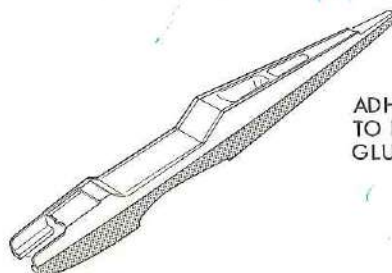
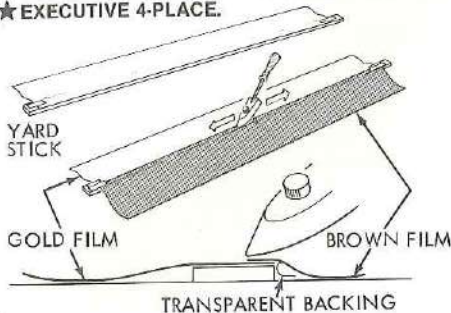
b Apply covering to hatch top.
 Cut corners and slit sides.

c Wrap and seal covering around edges.

d Trim and wrap covering around to hatch bottom.

NOW FOLLOW THE PROPER SEQUENCE ★ BELOW FOR THE COLOR SCHEME YOU HAVE SELECTED IMPORTANT: IN THIS SERIES OF SKETCHES, NEW APPLICATIONS OF COVERING ARE SHOWN SHADED

★ EXECUTIVE 4-PLACE.



ADHERE COVERING FIRMLY TO FUSE IN CANOPY GLUING AREAS

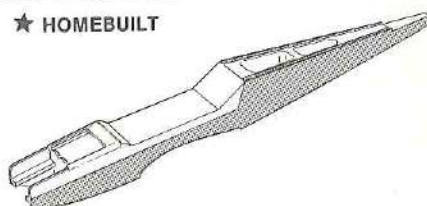
DO NOT COVER STAB PLATFORM

3. Cut two strips of covering for side. Using splicing procedure shown above, join strips, allow 1/4" overlap.

4. Cut and apply bottom covering to fuse.
 Apply spliced pieces to fuse sides.

5. Apply top covering.
 Apply 1/4" wide Color-Stripe as final trim.

★ HOMEBUILT



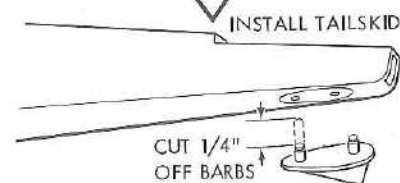
ADHERE COVERING FIRMLY TO FUSE IN CANOPY GLUING AREAS

DO NOT COVER STAB PLATFORM

4. Cut front side pieces and apply. These pieces should overlap main side pieces about 1/8" for good joint.

- Apply top covering.
 Apply 1/4" wide Color-Stripe as final trim.

3. Cut and apply bottom covering to fuse.
 Cut and apply side covering.



- Cut 1/4" off nylon tail skid barbs. Strip covering from fuse in skid mounting area, and glue in place.

DECAL INSTRUCTIONS

For the instrument panel decal only, when cutting it from decal sheet carefully trim it even with the black printed area to provide a good fit on the dashboard. Apply panel and remaining decals as described below.

- Cut decal sheet apart in sections as needed, and apply decals to fuse & fin. Dip each section in lukewarm water for about 15 seconds. Remove and allow to stand. In about a minute, decal will begin to loosen. Then slide off onto moistened area on model. With soft cloth or cotton, smooth out carefully to remove air bubbles and excess water.

COCKPIT DETAILING & CANOPY INSTALLATION



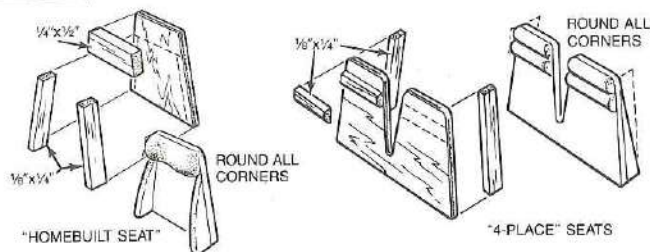
TAPE TOGETHER, APPLY DABS OF GLUE AT JOINT, REMOVE TAPES AND COMPLETE GLUING.



PAINT PILOT AS DESIRED

PILOT FIGURE COURTESY OF WILLIAMS BROS.

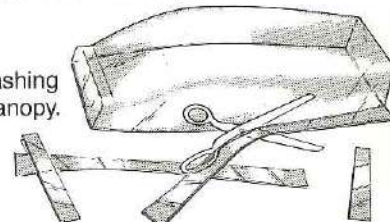
1. Cut pilot halves apart at bottom, and trim off scrap. Rub each half gently over fine sandpaper to smooth edges for joining. Carefully align front and back and hold together with tape. Apply dabs of glue at joint, remove tapes and complete gluing.



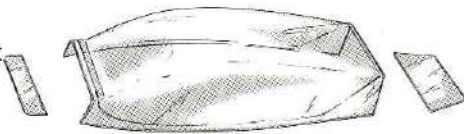
PAINT BLACK OR AS DESIRED TO SUIT COLOR SCHEME

2. Glue balsa strips to die-cut seat(s) as shown above for desired version.
3. Using plan and photos on the box label, locate the positions for pilot and seat back(s). To help prevent these from breaking loose inside the canopy, strip the cockpit floor covering from their base areas so that they may be glued directly to the bare wood. Glue them in place.

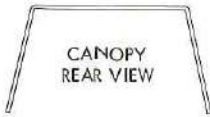
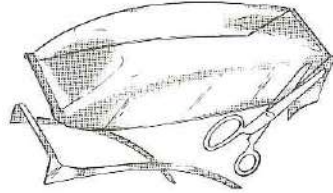
- 4a. Carefully remove flashing all around bottom of canopy.



- 4b. Remove front and rear scrap panels.

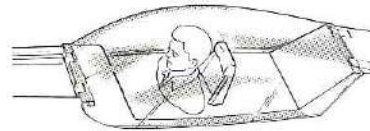


- 4c. Trim scrap all around bottom of canopy by cutting on marked line.



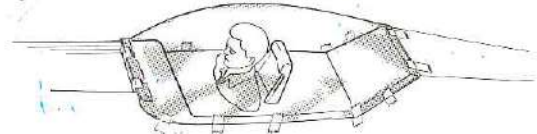
- 4d. Gently pinch rear top corners of canopy to provide a good square fit on fuse. Temporarily set canopy in place on fuse and note where its outline contacts fuse. For better gluing lightly sand covering in this outline area—light sanding only, just dulling the surface, and on the inside edge of the canopy,

lightly sand a $\frac{3}{16}$ " wide band all around. For added gluing strength, also make a series of pin hole punctures through covering so glue can grab wood underneath.



IMPORTANT!
TO AVOID HEAT BUILD-UP INSIDE CANOPY, DRILL A FEW $\frac{1}{8}$ " DIA. HOLES THROUGH CABIN FLOOR.

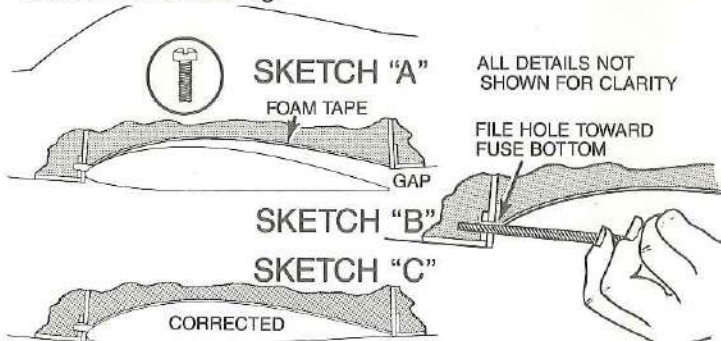
- 4e. Locate front of canopy so it is flush with hatch opening, and tape the canopy at the front and rear to the fuse holding this position. Glue canopy at front and rear to fuse and let dry.



- 4f. Tape canopy sides to fuse and glue in place. When dry, remove tapes and complete gluing.

V FINAL ASSEMBLY

- Insert $\frac{5}{16}$ " wing hold-down dowels through cabin with a twisting motion. Dowels should protrude an equal distance from sides of cabin. Glue firmly in place.
- Using fuel-proof paint, seal exposed ends of dowels and any other unprotected wood surfaces.
- The wing saddle should be lined with $\frac{1}{16}$ " x $\frac{1}{4}$ " self-adhesive foam wing seating tape. When the wing is in place, the tape seals against entry of exhaust oil and dirt into the radio compartment. Also, the tape is a cushion between wing and fuse to prevent abrasion of the covering.



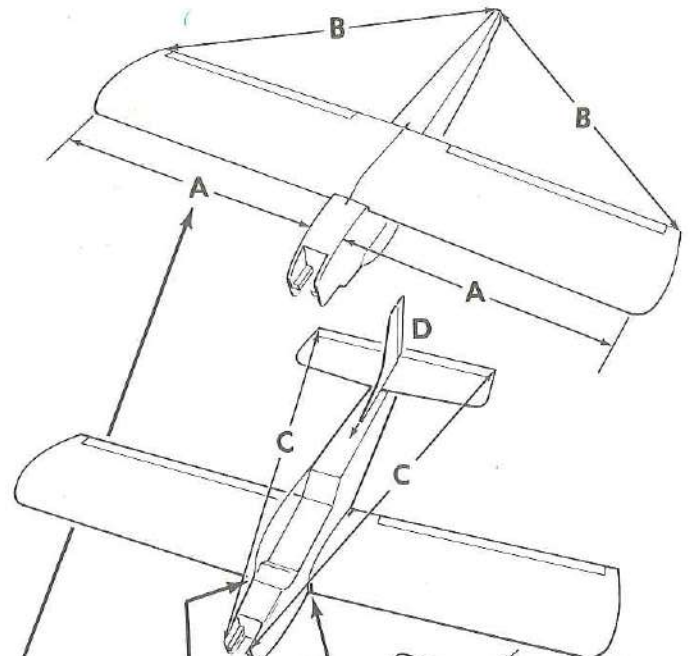
- After applying foam wing seating tape, the bolt-on wing may not fit in place (sketch A). To correct this, file dowel hole slightly lower (towards fuse bottom) using a rat tail file (sketch B). Continue until wing fits correctly in saddle (sketch C).

- For rubber banded wing, mount wing on fuse using rubber bands. Measure carefully from fuse sides out to wing tips (arrows 'A') to be sure wing is centered. Then measure from wing tips to back end of fuse (arrows 'B') to make sure wing is square with fuse. Mark wing at leading and trailing edges with matching line-up points. Color-Stripe tape can be used for this, or certain marking pens.

- For both bolt-on wing and rubber banded wing. Using no glue, trial fit stab in place on fuse, marking it for center, and adjust as necessary to line up with wing. Then measure from stab tips to fuse front (arrows 'C') to make sure stab is square with fuse. Mark match-up lines on fuse and stab for alignment.

- To provide a firm wood-to-wood glue joint, strip covering from bottom of stab center where stab contacts fuse (see sketch D). Avoid cutting structure underneath. Be certain to leave enough covering firmly bonded to stab center (minimum $\frac{1}{8}$ " to $\frac{3}{16}$ "). Likewise, if stab area on fuse was covered, remove covering. Glue stab firmly to fuse and let dry.

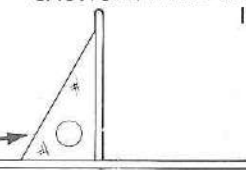
- Trial fit fin in place on fuse/stab (arrow 'D'). Strip covering from fin bottom (if covered) and respective area on fuse/stab. Glue fin firmly in place, and square with stab. Let dry.

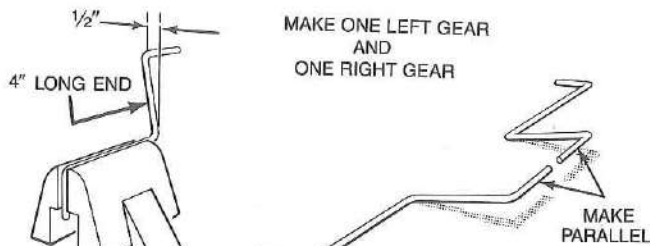


AT LEAST $\frac{1}{8}$ " OF COVERING FIRMLY ATTACHED TO CENTER PLATFORM

Sketch D

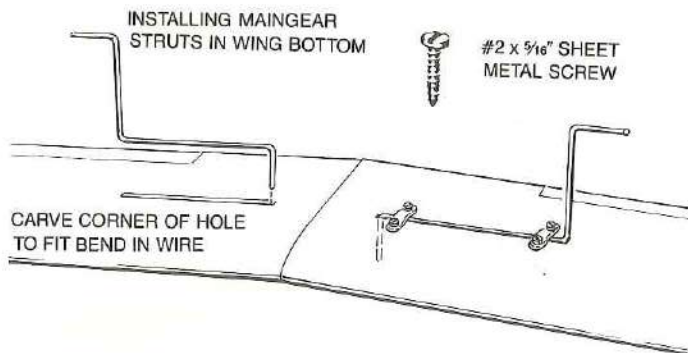
USING A SHARP BLADE, STRIP COVERING FROM STAB, FIN, & FUSE WHERE THEY MATE, FOR WOOD TO WOOD GLUE JOINT. LEAVE $\frac{1}{8}$ " TO $\frac{3}{16}$ " OF COVERING FIRMLY ATTACHED TO CENTER PLATFORM. CAUTION: WHEN TRIMMING COVERING, AVOID CUTTING INTO WOOD STRUCTURE UNDERNEATH.



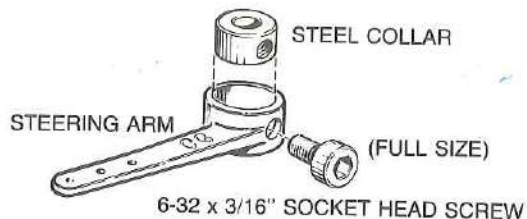


IF VISE IS UNAVAILABLE, CLAMP L.G. BETWEEN TWO HARDWOOD BLOCKS

- Clamp formed wire main gear struts in a vise and make one left and one right gear by bending the 4" long end 1/2" as shown.

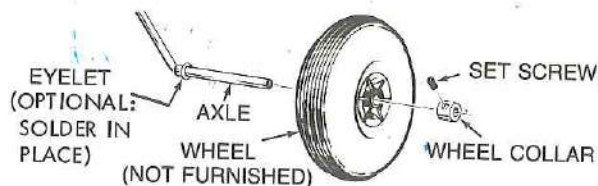


- With vise-bent portion leaning towards T.E., insert formed wire main gear struts in wing (corner of drilled hole may need to be carved to fit bend in wire). Position nylon landing gear straps; then mark, drill, and mount with #2 x 5/16" screws (see sketches above and illustration on page 5).



- Press one of the four steel collars into the pocket in the nylon steering arm (side holes must be aligned). Thread #6-32 x 3/16" socket head screw in a few turns.

- Install nose gear strut in bearing and steering arm (refer to illustration on page 5). Tighten socket head screw with Allen wrench.



- Install wheels on axles as shown; eyelet first, wheel, then wheel collar and set screw.

FUEL SYSTEM

- Install your fuel tank, hold it level by supporting the rear end with foam rubber as shown on the plan.

OPTIONAL PRESSURE FEED

- If your muffler has a fuel-line type fitting on it, you can use it to "pressure feed" to the engine for smoother and more reliable running. In this case, the vent line is connected to the muffler fitting.

VI RADIO INSTALLATION

1. Check List. Each Item Must Be Completed Up To This Stage.

- Model is fully covered and painted wherever necessary (Pages 24, 25, 26 & 27)
- Control surfaces are hinged in place (Page 25)
- Tail assembly is glued solidly to fuse.
- Engine screwed in place (Page 20).
- Muffler on.
- Prop and spinner in place.
- Fuel tank installed, with foam rubber supports to hold it level.
- Stab and rudder pushrods complete. (Page 22).
- Landing gear and wheels installed.

BALANCE NOTE. A final balance check will be made later on. Most all brands of equipment when installed as shown will result in a properly balanced condition.

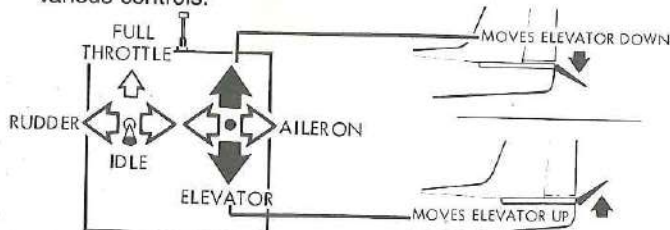
2. Servo Identification

A. Read and follow the instructions that came with your radio.

B. Your batteries should be fully charged.

C. Hook-up Radio and Try Operation.

- Refer to "Transmitter Function Sketch" below, and observe which servo wheels move when stick is moved for various controls.

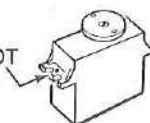


- Apply tape (which you can write on) to each servo. Identify each servo for its control function. Mark the plug to each servo the same way: "R" for rudder, "E" for elevator, "T" for throttle and "A" for ailerons. If your receiver doesn't have separate plugs for each servo, but places for the servos to plug in, apply a piece of tape nearby that you can mark for each application.

3. Servo Movements

As mentioned in the introduction on page 2, radio systems with "servo reversing" simplify radio installation. With a **regular non-reversing** system, you must match each pushrod to its corresponding servo's rotation. With "servo reversing," pushrods can be hooked up to either side of the servo's output wheel, and after checking the control response, a servo responding in the wrong direction is easily switched to correct action (see your radio manufacturer's instructions). The radio arrangement on the plan shows standard servo and pushrod placement for a regular non-reversing system and is recommended for "servo reversing" systems also.

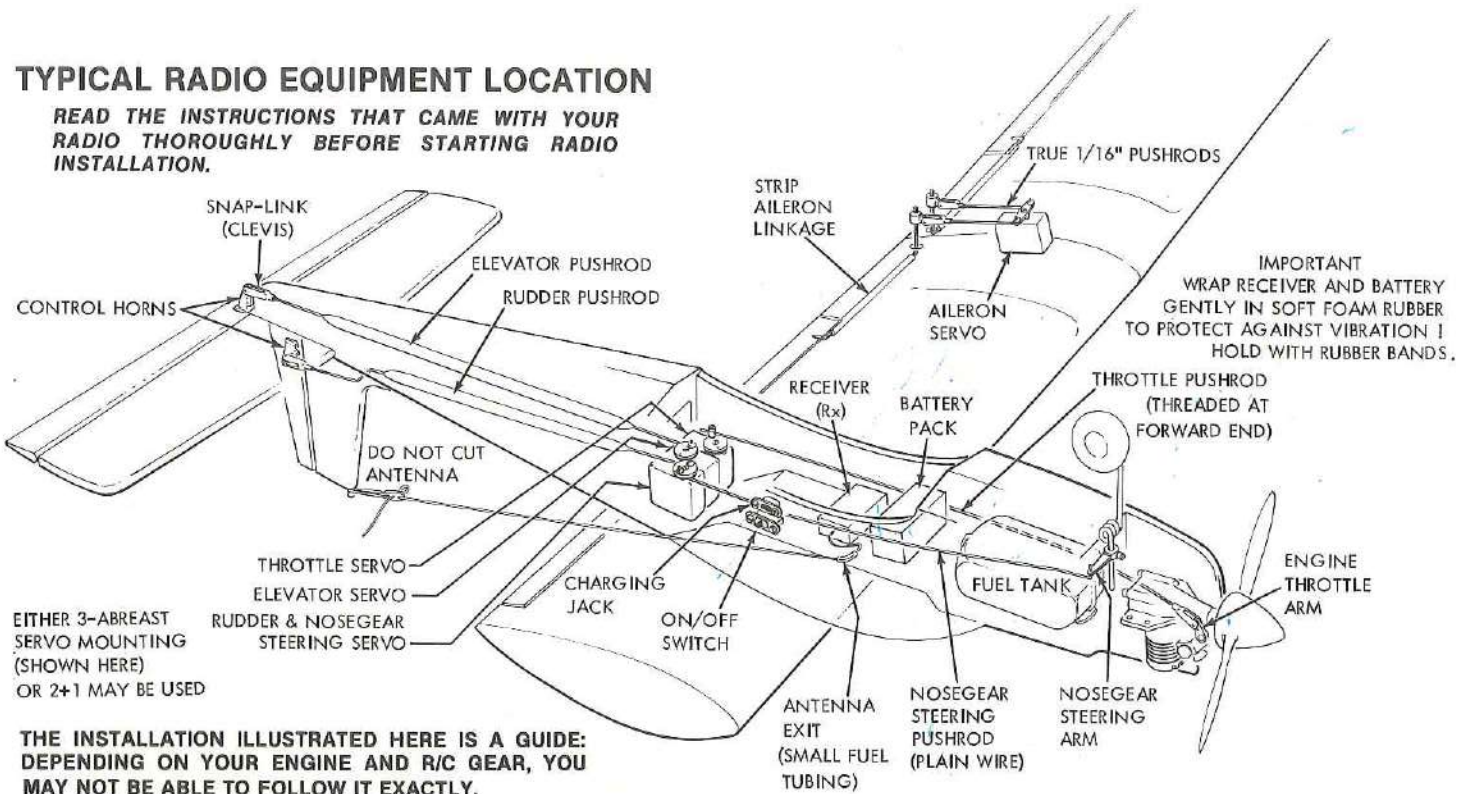
"REVERSE" SERVO CAN BE IDENTIFIED BY A DOT IN MOUNTING FLANGE AS SHOWN HERE, OR A DIFFERENT COLOR CASE OR MARKINGS.



In radio sets without "servo reversing" feature, the throttle servo should be a "reverse" servo. A "reverse" servo can be identified by a dot (see above), or a different color case or markings.

TYPICAL RADIO EQUIPMENT LOCATION

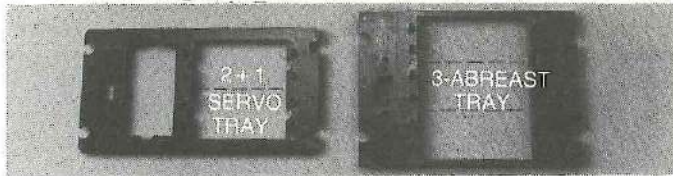
READ THE INSTRUCTIONS THAT CAME WITH YOUR RADIO THOROUGHLY BEFORE STARTING RADIO INSTALLATION.



IMPORTANT
WRAP RECEIVER AND BATTERY
GENTLY IN SOFT FOAM RUBBER
TO PROTECT AGAINST VIBRATION!
HOLD WITH RUBBER BANDS.

THE INSTALLATION ILLUSTRATED HERE IS A GUIDE:
DEPENDING ON YOUR ENGINE AND R/C GEAR, YOU
MAY NOT BE ABLE TO FOLLOW IT EXACTLY.

4. Servo Arrangement.



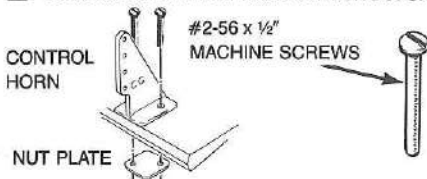
If a servo mounting tray is furnished with your radio, it makes it easier to mount servos. The most common tray is a "2 + 1" type (as shown above left and in the auxiliary plan view). Either a 2 + 1 or a 3-abreast arrangement can be used in the Sky Tiger. But in order to use a "2+1" tray, the rear of the cabin must be modified as shown on page 18 Step 11 during the fuselage assembly. If a tray is not used, the 3-abreast mounting is recommended with servos mounted directly on plywood rails as shown in the main plan view.

- For "2 + 1" mounting, with throttle servo at forward position, place servo so output wheel is on same side as engine throttle arm. For 3-abreast mounting, place throttle servo on same side of model as throttle arm.
- Rudder servo should be on side opposite to throttle servo so it can drive the nosegear steering arm in a nearly straight line.
- Elevator servo occupies remaining rear position for "2 + 1", and is in the center for 3-abreast.

5. Mounting The Control Horns and Pushrods.

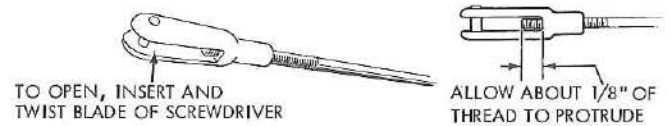
Rudder Horn (Small):

- Refer to fuse side view on plan for correct location.
- Tack-cement small horn on correct side of rudder.



- Drill through holes in horn, and mount nut plate on other side using screws as shown. Trim screws flush with nut plate.
- Remove covering from die-cut hole in fuse top (adjacent to dorsal fin) for rudder pushrod.
- Lay pushrod over pushrod views on plan, and make

bends as required. Working from cabin, feed rudder pushrod (threaded end) through fuse rear and out exit hole. Use a loop of string or wire to pull threaded end up through exit hole.



- Twist snap-link (clevis) onto threaded rod. Hold wire with pliers while installing snap-link. Connect to rudder horn.

ELEVATOR HORN (Large):

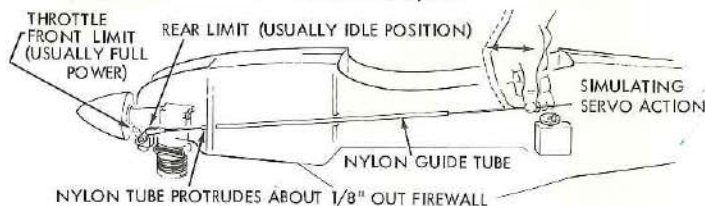
- Insert threaded end of elevator pushrod from cabin through fuse rear and out slot opening about 2".
- Install snap-link on rod, and connect to elevator horn.
- Position horn under elevator—refer to plan for correction location. When horn is centered so snap-link moves in and out of tail opening without scraping sides, mount horn on elevator.

6. Mounting Servos, using a tray (for mounting without tray, follow instructions as applicable).

- Tape front end of rudder and elevator pushrods out of the way up near the wing saddle.
- Insert the soft rubber grommets into the mounting holes of your servos and tray.
- Correctly position servos in tray and gently fasten them in place with screws provided with radio system.
- Try fitting a 7/16" x 3 9/16" ply rail at the rear rail location. If the rail is too long to fit inside fuse, sand one end until it fits snug. Glue it in place.
- Place servo tray between rails, and adjust the forward rail for mounting tray. Glue this rail in place. (IMPORTANT: for mounting servos directly on rails without a tray, allow 1/16" clearance all around each servo; only servo grommets to contact rails, and glue forward rail in place.) Mark through the grommets for the location of the mounting screws.
- Remove the tray or servos. Glue front rail braces in place to fuse sides (See side view on plan). With a 1/16" drill bit, drill holes in rails, and fasten tray in place with screws provided with your radio system. When mounting servos without tray, gently fasten them with #2 x 3/8" sheet metal screws (not included).

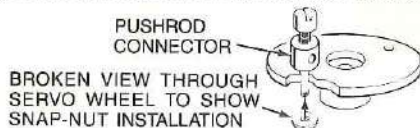
7. Installing The Throttle Pushrod.

- Screw snap-link on the extra-long remaining threaded rod.
- Carefully bend rod to fit curve of throttle pushrod as shown in fuse bottom view on plan.
- Cut 11 1/2" throttle pushrod guide tube from long nylon tube (remainder is steering pushrod guide tube).
- Starting at hole in firewall, slide throttle guide tube into fuse and through upper side slot in former BC. Nylon guide tube should protrude 1/8" out firewall as shown in sketch below. Slide rod through guide tube and connect snap-link to engine throttle arm.
- At rear end, make sure bend in wire leads it towards throttle servo wheel as shown on plan.



Move pushrod back and forth to simulate servo action. The pushrod should move freely; if not, adjust wire where necessary. Feel the front and rear "limits" of the throttle arm. Later, when setting controls, be sure to set the throttle servo linkage within the range of throttle arm movement. Glue guide tube to firewall, former BC and fuse side.

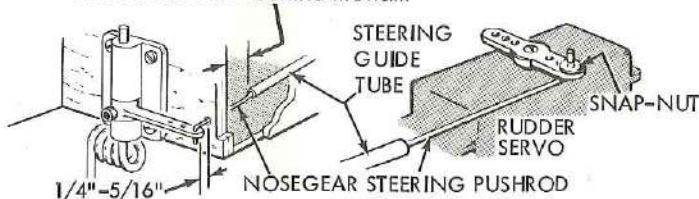
- Remove servo wheel, and install the CG Pushrod Connector as shown below. This device lets you easily adjust throttle pushrod movement. Remount servo wheel.



Make sure throttle servo is at idle position. Engine throttle arm also should be at rear or idle position. Align and cut the pushrod wire so it extends 1/4" to the rear of the pushrod connector, and attach. Check action with radio, and if OK, throttle pushrod hookup is completed.

8. Installing The Nosegear Steering Pushrod.

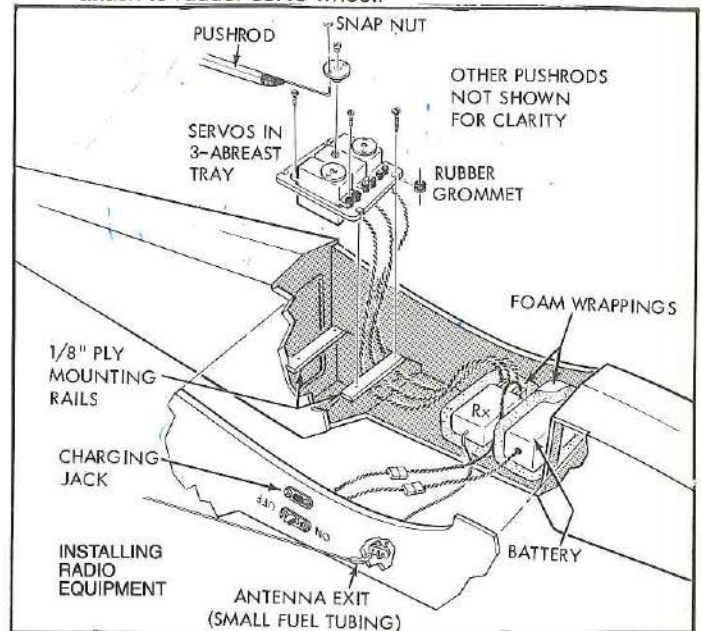
- Make a square bend down 1/4" from one end of 1/16" x 16 3/4" wire, and a slight upward bend 1" further back as shown on plan side view. Slide steering guide tube over wire, and insert unbent end of wire through hole in firewall, lower side slot in former BC, and back towards the rudder servo. Slip bent end into outermost hole in steering arm. Guide tube should remain about 3/4" behind firewall.



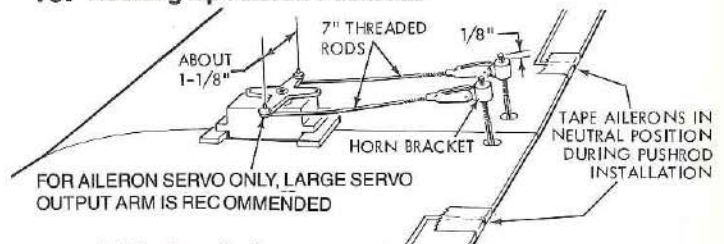
- Bend the wire towards proper hole in rudder servo wheel, but DO NOT CUT YET! Move pushrod to check for free movement; correct as necessary. Glue guide tube to former BC and fuse side.
- With nosewheel pointing dead straight ahead, the rear edge of the steering arm should be 1/4" - 5/16" away from the firewall. Back at the servo, allow additional 3/8" past servo wheel hole, and cut it there. Bend cut end up 1/4".
- Roughen 1/4" bent end with sandpaper for better grip of snap-nut. Remove servo wheel to insert pushrod, add snap-nut, and then remount. Check action with radio. This completes the nosegear pushrod hookup. Later, during taxi tests, you can adjust nose wheel steering by loosening steering arm socket head screw.

9. Hooking Up Elevator and Rudder Pushrods.

- Position elevator pushrod so that the top of elevator is about flat with top of slab. Allow additional 5/16" past servo wheel hole, then cut and bend forward end of pushrod. Roughen bent-up wire with sandpaper, remove servo wheel and insert wire, and retain with snap-nut.
- Position rudder pushrod so that the rudder is aligned with fin. Cut and bend forward end of pushrod as above, and attach to rudder servo wheel.



10. Hooking Up Aileron Pushrods



- Re-install aileron servo in wing. Tape ailerons in neutral position (so flat bottom of wing and ailerons are flush).
- Install horn brackets on aileron horns as shown. Install snap-link on each 7" True 1/16" threaded rod, then connect them to horn brackets. Align each rod to its respective hole in servo wheel. Allow additional 5/16" past servo wheel holes, then cut and bend forward end of pushrods, same as elevator pushrod procedure.

11. Installing Switch and Charging Jack.

- Temporarily set battery and Rx in fuse. Position switch and charging jack cover plates on outside of fuse on side opposite to engine exhaust, and where they will not obstruct the battery or Rx. Mark through cover plates for holes and openings. Refer to side view on plan, and see location of antenna exit through fuse side - a 1/8" hole between battery and receiver. Mark this location for hole. Remove battery and Rx.
- Make holes through fuse side. Make sure hole for switch button is long enough for it to move to ON and OFF positions.
- Install switch and jack.
- Later, when radio is operating, identify ON and OFF positions with decals provided. Preferred "ON" position is forward.

12. Battery Pack.

- You must have fully charged nicads for flying.
- Wrap battery in 1/2" very soft foam rubber to cushion it from vibration and shock. Use rubber bands or tape to hold the

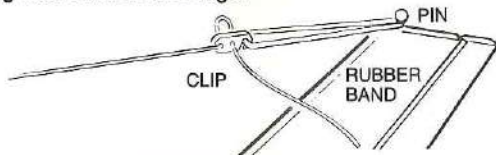
foam around the battery. It is also good to place battery and Rx in individual plastic bags to protect against fuel and oil.



To keep the battery and receiver from falling out of the fuse as you're working on it, make two hooks for a retaining rubber band as shown above. Refer to the plan views for suggested locations, but glue the hooks to suit your radio.

13. Receiver (Rx).

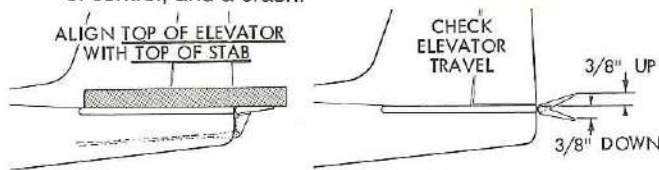
- Do not cut the antenna wire attached to the Rx.
- Wrap Rx carefully in foam like the battery.
- Re-connect all cables so R/C system is operational; be sure that each servo is plugged into its respective Rx terminal.
- Place Rx in fuse behind the battery.
- Glue a 1" length of small diameter fuel tubing into antenna exit hole as shown on plan. Install strain relief (supplied with radio) on antenna about 2" from Rx. Lead antenna through tubing and outside fuselage.



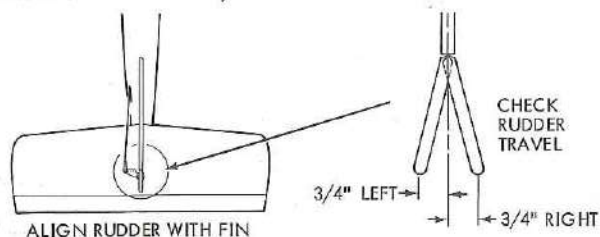
- Using clip supplied with radio, suspend antenna with rubberband from top of fin as shown above. Adjust antenna in clip so it is just slightly taut, not tight. Let excess wire hang loose from clip.
- Gather all excess cables together behind Rx, and hold them down with foam.
- Apply "ON/OFF" decals to outside of fuse to identify.

14. Setting Control Surfaces (IMPORTANT)

All pushrods must move freely, without binding; adjust if required for smooth operation. When setting control travel, be cautious that no servo is hooked to a control in a manner that prevents the servo wheel from moving through its complete range of rotation. For example, if the throttle servo "buzzes" when moved to "full-throttle" position, the servo still has movement left, but is jammed against the engine's full-throttle limit position. This can damage the servo and drain the battery, leading to loss of control, and a crash.



- With elevator trim tab on Tx set in center, adjust elevator snap-link until top of elevator is flat with top of stab as shown above.
- Move the elevator stick on Tx full up and down. The elevator should move down about 3/8" and up 3/8".

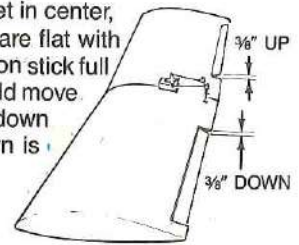


- With rudder trim tab on Tx set in center, adjust snap-link until rudder aligns perfectly with fin. Nose wheel should point straight ahead.

Move the rudder stick on Tx full right and left. The rudder should move to the right about 3/4" and left 3/4". The nosewheel should move only very slightly, as it doesn't take much to steer on the ground.

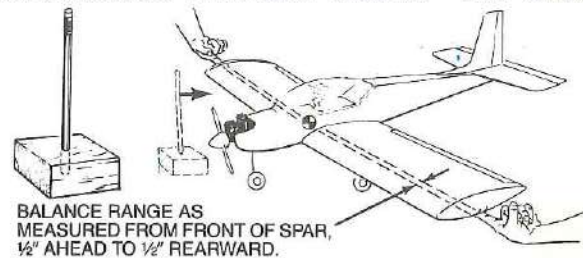
Move throttle lever on Tx to cycle the throttle from idle to full power. Minor adjustments can be made by shifting the snap-link location on the engine throttle arm.

With aileron trim tab on Tx set in center, adjust snap-links until ailerons are flat with bottom of wing. Move the aileron stick full right and left. The ailerons should move respectively up about 3/8" and down 3/8" (slightly more up than down is desirable).



THIS COMPLETES THE RADIO INSTALLATION

BALANCING THE SKY TIGER—IMPORTANT!



Enlist someone's aid to help you balance the model as shown. If you must balance it alone, make the simple balance stand at left from scrap lumber (2 x 4, etc.) to assist you. The front and rear limits of the balance range have been molded into the plastic wing tips. To make them easier to see, you can mark them with strips of striping tape or marking pen. As measured from the front of the spar, the range is 1/2" ahead of the spar to 1/2" rearward. This is a range of 1", and your model probably will balance within it. Lift the model at the spar, and move your fingers forward or back until model is level. If you need to support the model outside the balance range to get it level, add weights to the extreme nose or tail as needed to achieve proper balance. Small self-adhesive weights made just for this purpose should be available at your dealer.

PRE-FLIGHT & BASIC AEROBATICS

The following is presented as a pre-flight review for safe and enjoyable flying. We assume builders of the SKY TIGER are experienced R/C flyers, having previously mastered flying at least one R/C plane.

If you have never successfully flown an R/C model before, do not try to teach yourself to fly this higher performance model. Even full-scale pilots have problems learning to fly models, because it's different - they're not in the cockpit. We strongly recommend that you learn with a high wing trainer, such as the EAGLE 63 or EAGLET 50, and that you ask your dealer for guidance.

VII WHERE TO FLY YOUR MODEL

Fly only in areas sanctioned for R/C and known to be free of radio interference. If you don't know the whereabouts of an R/C club near you, write the Academy of Model Aeronautics (AMA) and ask if they have a club on file in your area. Most clubs are chartered with the AMA, and we recommend you become a member. Their address:

Academy of Model Aeronautics
1810 Samuel Morse Drive
Reston, VA 22090

VIII RADIO CHECK

Before going to the field to fly, with batteries fully charged, turn on receiver and transmitter and actuate all controls many times until you are satisfied with all functions. Stand behind the model, and make sure that the control responses are correct. Move the control stick to the right and the right aileron should go up. Moving the

stick back or down on the Tx should move the elevator up, and vice versa.

Check also to see that your nose wheel turns to the right when you give right rudder. Your throttle should open to permit full power when the stick is moved forward or up. Make sure that everything is neatly and firmly in place—engine fastened down, servos snugged down, receiver and battery wrapped in foam rubber, tank properly supported, etc. Prop and spinner must be tight. Nothing should be loose, or unfinished, or unchecked. Receiver antenna must be extended, not coiled up inside the model.

Prior to the beginning of each day's flying, make a range check of your equipment in accordance with the manufacturer's instructions. In general, with transmitter antenna collapsed to 6" to 8", you should have at least 100 feet range on the ground. To check this, turn on both the transmitter and receiver switches, set the model heading away from you, and walk away while transmitting signals. Watch to see that no signals are missed until you are at least 100 feet away. Only if the equipment works perfectly should any flights be attempted. **Be careful not to use your transmitter** when someone else on the field is flying or testing on the same frequency.

With everything ready, the engine should be started and broken in for at least a tank or two at no more than moderate speed. While

the engine is running, the control surfaces should not jitter or move until you command them. The throttle also should respond to your command.

CHECK STEERING THE MODEL ON THE GROUND

Apply minimum throttle so that it just keeps the model moving at a walking pace. With rudder stick and rudder trim in neutral position, the model should move straight ahead. If it constantly turns left or right, the nose wheel is not pointing straight ahead, and should be adjusted until it is correct. Adjust the nose wheel only, loosening the steering arm to do so. After taxi runs are completed, thoroughly examine the model, and tighten loose screws, etc.

PRE-FLIGHT CHECK LIST, THINGS TO DO, AND THINGS TO TAKE TO THE FIELD

- Flight batteries fully charged
- Radio transmitter (DON'T LEAVE IT AT HOME!)
- Fresh 1-½ volt starting battery & Glo plug clip
- Tools to tighten anything that can vibrate loose
- Fuel and fuel bulb or pump
- Paper toweling (for clean up)
- SUPER JET
- An important yet sometimes neglected pre-flight check is to always make sure the wing is securely banded to the fuse! **Use at least seven #64 rubber bands on each side of the wing;** that's a total of fourteen.
- Extra #64 rubber bands
- Extra props
- Prop wrench

AEROBATICS

We highly recommend the book **Flight Training Course, Volume II**, published by **R/C Modeler Magazine**, a small portion of which they have graciously permitted us to reprint here.

On your previous R/C plane, you probably have already tried some of the maneuvers shown here. We present them as an introduction and review of a rewarding aspect of R/C flying—carefully planned and executed flying technique. It's something even expert pattern flyers must practice diligently. An apparently simple thing such as "Touch and Goes," and flying a tight, well-defined traffic pattern are really basic to performing accurate and precise advanced maneuvers.

"Touch and Goes" are an exercise in approach planning, airspeed control, and smooth use of the throttle. These are important

elements for all advanced maneuvers. And they will be flown only as crisp and graceful as you want them to be since "practice does make perfect!"

"Which Side is Up?" The business about learning to recognize which side is up may sound foolish, but many a plane has bitten the dust because the pilot thought it was flying one way and it was going another. Other than learning to recognize the plane's silhouette at different angles and attitudes, the best insurance is to learn to keep your head on what you're doing. That is, force yourself to remember where you've come from as well as where you're going. For example, if you concentrate on the fact that you're making a left turn, you'll probably never mix up that silhouette in the sky. If you look away though or forget what the plane is doing, coming back to it can cause a few new grey hairs!

TOUCH AND GOES

In doing a Touch and Go you'll be putting three things together that you've already worked on: the final leg of the Traffic Pattern Approach, the Landing Perfection, and the Takeoff. The only thing that's added is making the transition from the touchdown to the takeoff while the plane is still rolling. And, you have to be able to put your plane down on the runway with enough room left over for a smooth takeoff and gradual climb out.

What The Touch And Go Looks Like.

The plane is flying at about 25-foot altitude at about 200 feet from the end of the runway flying into the wind. The engine is either running at an idle or nearly so with the plane sinking gradually toward the runway in a slightly nose-down attitude. When the plane reaches about 6-foot altitude, the glide path levels off in preparation for the flare out and final touchdown.

When the plane touches down, it slows down to approximately ¼ the flight speed. Without stopping the plane begins accelerating and lifts off. The lift off and climbout is gradual and smooth.

THE LOOP

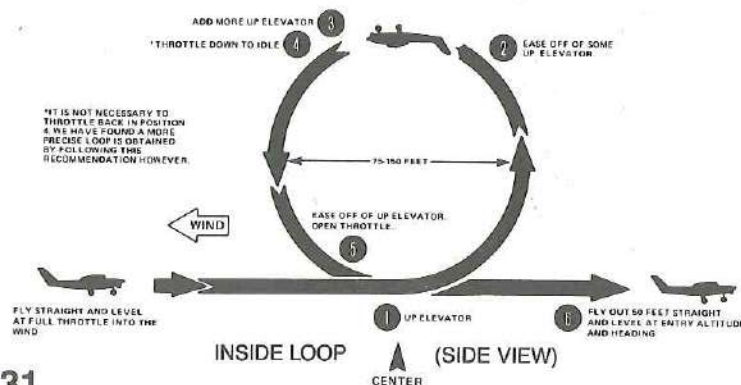
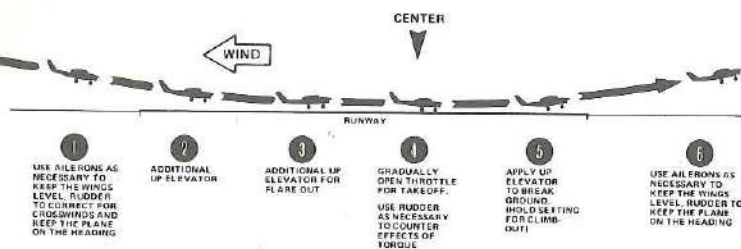
This is a good one to start with because it's usually the first "stunt" the new pilot has the guts to try. Another reason is that, at first glance, there seems to be nothing to it.

What The Maneuver Looks Like.

The model starts the maneuver flying straight and level into the wind. Then it pulls up into a smooth, round loop. The up and down portions should be straight up and down with reference to the ground. That is, the plane shouldn't fall off to the left or right. The speed of the plane should be constant throughout the loop.

As the plane finishes the loop, it should pull out in a straight and level flight at the same heading and altitude as it entered the loop and fly off for 50 feet.

TOUCH AND GO (SIDE VIEW)



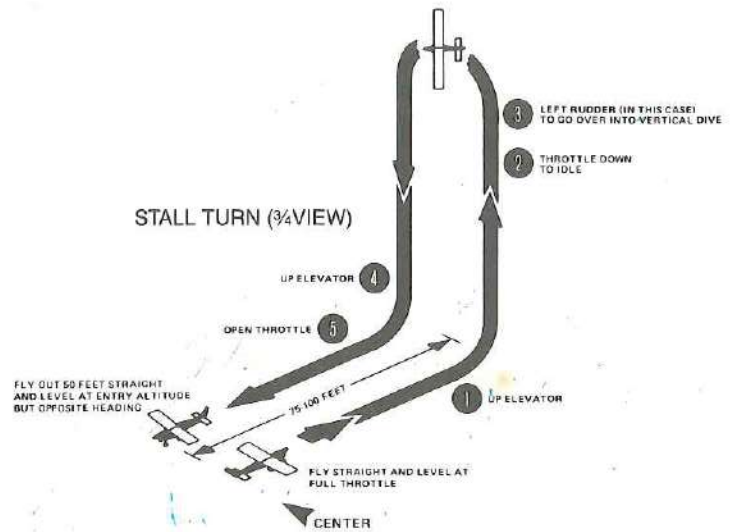
THE STALL TURN

Getting the plane in a vertical climb and applying rudder at the proper time is what the Stall Turn is all about. Too soon, and you'll only wag your tail. Too late, and it won't do any good — the plane will just stall out and fall off. So, to get the Stall Turn to happen as it should, you have to be able to get the vertical climb vertical. Recognize that second or two just before the plane stalls out — while there is still enough air moving over the rudder and apply the rudder. That gets the tail moving so it will continue to coast around while the plane stalls out.

What The Stall Turn Looks Like

The Stall turn, or hammerhead, is one of those smooth, pretty maneuvers. Flying straight and level, past center about 100 feet, the plane pulls up sharply into a vertical climb. As it climbs, the engine idles down and the plane begins to slow down as if it has run out of gas. When it looks as though there's no more oomph left, the plane pivots 180° on its left or right wing tip and heads straight down. Under control all the way.

When the plane gets to the entry altitude, it pulls out, heading in a direction opposite the entry and levels off. The throttle opens up and the plane flies off. Neat.



THE HORIZONTAL ROLL

Before you get going on this one, here are some things you should know. First, and perhaps most important to keep in mind, is that when the plane is inverted the elevator works backwards. When the plane rolls through the inverted position, you give down elevator to keep the plane's nose up. Think about that one for a minute. It's important.

And don't forget:

1. Fly at an altitude that will give you a good margin for error, especially since you'll probably end up in a 30-degree dive on your first tries.
2. Practice with the plane in front of you rather than over your head, and with the sun behind you.

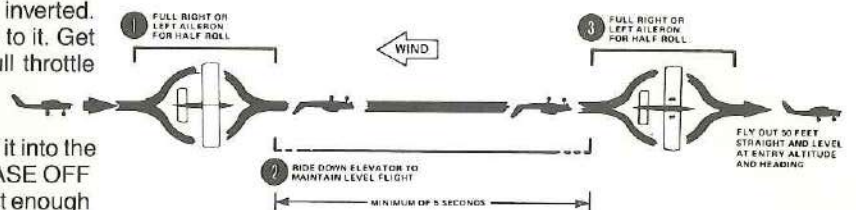


INVERTED FLIGHT

Perhaps the easiest and safest way of getting your plane inverted the first time is through the "stretched loop." You just fly into the first part of a loop. When the plane gets to the top, it's inverted. Then to come out of it, finish the loop. That's all there is to it. Get your plane out a bit. Then make a turn so it's flying full throttle downwind toward you.

As the plane passes in front of you pull up elevator to put it into the "up" side of a loop. When the plane gets near the top, EASE OFF of the up elevator and put in some down elevator. Hold just enough down elevator to keep the plane level. The plane should be flying away from you inverted. If the plane banks to the right or left, use the ailerons to straighten out. Aileron response is the same inverted as right-side-up. If the plane loses altitude while it's inverted, put in some more down elevator. If it climbs, because you're giving it too much down, ease off of some down elevator. Find the right amount of down elevator to hold for a level inverted flight path. After the plane has flown inverted a couple of seconds or so, reduce throttle and finish your loop. Ease off of the down elevator and pull up elevator. The plane should dive down to finish the loop you started earlier and come out in straight and level flight toward you.

Fly only a couple of seconds or so on your first times until you get



NOTE FOR YOUR FIRST TRIES WE RECOMMEND GETTING INVERTED THROUGH WHAT WE CALL THE STRETCHED LOOP IN TEXT.

used to seeing what the plane is doing up there. Practice flying inverted using the stretched loop entry until you feel comfortable keeping pressure on that down elevator and can hold straight and level flight inverted. As you get it working for you, increase the length of your inverted flight.

After you're more comfortable with flying the plane inverted, try getting into it using a half roll to the left or right to get inverted, fly inverted, then, half roll to the left or right to come out of it. To get into it, get your plane up to a safe altitude. Pull up a bit into about a 30 degree climb for more insurance.

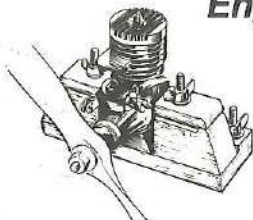
OTHER QUALITY CG ACCESSORIES

Engine Test Stand

Made of
ROCK HARD CANADIAN MAPLE

Husky enough to handle a big .61, and adjustable down to a T.D. .049. Beautifully finished in clear lacquer. Fully assembled, complete with all mounting bolts, restraining lugs, pins, and guide pins, ready to help you break-in your engine. See your dealer.

No. 293



Super Tote

THE ENGINEERED FIELD BOX

Designed so your equipment is right where you want it. And with its balanced load and narrow profile, it's easy to carry. Precision cut materials and complete hardware package.

Kit no. 92

