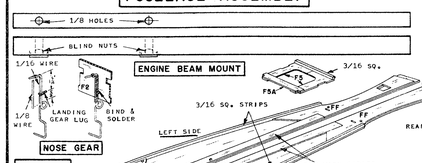
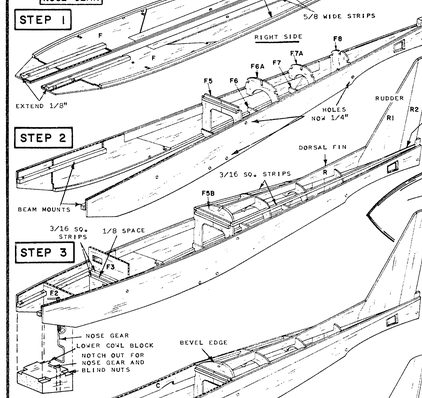
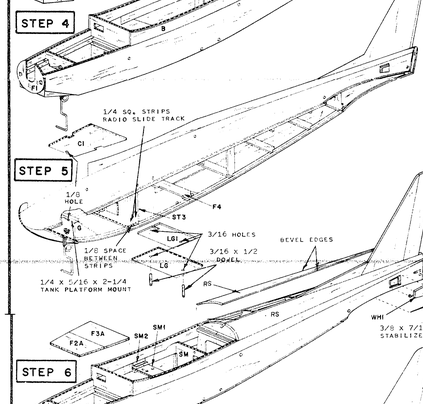
FUSELAGE ASSEMBLY







RADIO MOUNT DETAIL

ASSEMBLE RADIO MOUNT BY CEMENTING ST1 INTO NOTCHES IN ST. CEMENT TRIANGULAR GUSSETS ST2 TO EACH SIDE. USE CEMENT GENEROUSLY. GLUE TO TOP OF ST1 (IN CUT-OUT) AND SECURE WITH 2/56 SCREWS AND NUTS, FLAT SIDE OF NUTS AGAINST WOOD. INSTALL IN RADIO MOUNT.

REAR POST CROSS SECTION

FULL SIZE SEE FUSELAGE STEP #1.

TANK PLATFORM DETAIL

MAKE TANK SUPPORTS FROM SCRAP BALSA. FRONT CRADLES NECK AND REAR IS STOP. CEMENT SUPPORTS ON PLATFORM C THEN DOPE HEAVILY. LASH TANK TO PLATFORM WITH RUBBER BANDS. INSTALL AFTER RADIO BATTERIES (WITH FOAM RUBBER) ARE IN THE BATTERY COMPARTMENT BELOW.

LANDING GEAR DETAIL

SKETCH ABOVE SHOWS HOW VECO, OR SIMILAR TYPE (NOT INCLUDED) WHEELS ARE INSTALLED ON KNOBBY-BIT TYPE STAMPED ALUMINUM LANDING GEAR. SLIP WASHER ON LONG 4/40 X 7/8 SCREW FOLLOWED BY WHEEL, ANOTHER WASHER THEN NUT (OPEN SIDE FACING WHEEL) LEAVING JUST ENOUGH CLEARANCE SO WHEEL SPINS FREELY. INSERT INTO HOLE IN LANDING GEAR AS SHOWN IN BOTTOM DETAIL, SEW WHEEL ON NOSE GEAR. WHEELS ARE NOT SUPPLIED, WHEELS SHOULD BE PARALLEL SO HOOKL TRACKS STRAIGHT. PLACE LANDING GEAR ON DOWELS IN BOTTOM OF FUSELAGE AND HOLD IN PLACE WITH RUBBER BANDS AS SHOWN IN SIDE DETAIL. SEW RUDDER R3 IN PLACE WITH FIGURE 8 STITCHES AS SHOWN IN BOTTOM DETAIL, THEN FINISH INSTALLATION OF ALL RADIO EQUIPMENT, BOLT MOTOR IN PLACE. OFFICIAL "BIJUR" USED A NYLON 9-4 PROP AND FOX .15 ENGINE (NOT SUPPLIED IN KIT). THE INSTALLATION OF A 2-1/4" VECO SPINNER SHOWN (NOT SUPPLIED) IS OPTIONAL. USE 2 OUNCE VECO (NOT SUPPLIED) OR SIMILAR TYPE CLUNK TANK. IN ORDER THAT TANK CAN BE FILLED WITHOUT REMOVING COWL, SOLDER AN ADDITIONAL LENGTH OF METAL TUBING TO CAP AS SHOWN IN SKETCH AND SIDE VIEW DRAWINGS. TUBE SHOULD EXTEND PAST COWL FOR EASY FILLING. MAKE TANK SUPPORTS FROM SCRAP BALSA (SEE DETAIL) AND CEMENT SECURELY IN PLACE. APPLY 4 OR 5 COATS OF CLEAR DOPE TO TANK PLATFORM. TANK IS HELD TO PLATFORM BY WRAPPING RUBBER BANDS AROUND WITH UNIT IN PLACE AFTER BATTERIES HAVE BEEN INSTALLED (SEE RADIO NOTE) SLIP TANK AND MOUNT INTO TUBE AND SECURE WITH SCREW. PLACE COWL ON FUSELAGE, THEN TIE WING IN PLACE AS SHOWN WITH RUBBER BANDS. DO LIKEWISE WITH STABILIZER, BE SURE TO USE ENOUGH RUBBER BANDS WITH ENOUGH TENSIONS SO THAT WING AND STABILIZER ARE HELD FIRMLY IN PLACE. THEY WILL NOT LIFT OR SHIFT OFF DURING FLIGHT MANEUVERS. WING HOLDS ON VERY FIRMLY IN PLACE. MODEL MUST BALANCE 3" BACK OF WING LEADING EDGE. BEFORE EACH FLIGHT, CHECK THAT WING AND TAIL ARE IN PROPER ALIGNMENT AND THAT RADIO EQUIPMENT AND ENGINE ARE PERFORMING PROPERLY. GOOD LUCK!!! GOOD FLYING!!!

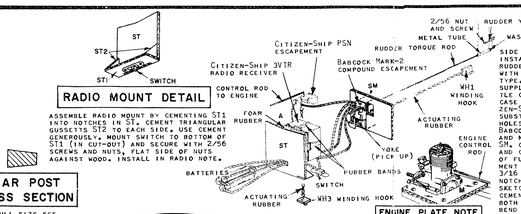
ENGINE PLATE NOTE

CEMENT BOTH PLYWOOD PLATES M TOGETHER, DRILL 1/8 HOLES AS THEY ARE MARKED AND MOUNT ENGINE WITH 4/40 SCREWS AND NUTS, SEE FUSELAGE STEP 7.

FINAL ASSEMBLY & PAINT NOTE

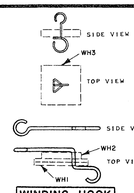
RUDDER BIRD IS NOW PAINTED USING FUEL PROOF DOPE. APPLY ABOUT 5 COATS OF CLEAR DOPE TO ENTIRE MODEL, INCLUDING INSIDE OF FUSELAGE BACK TO BULKHEAD F3. FINISH WITH COLOR DOPE USING AS MANY COATS AS DESIRED. BE SURE TO PAINT RUDDER R3. ORIGINAL "BIJUR" HAS RED WING AND TAIL WITH WHITE DESIGN, TRIMMED IN METALLIC BLUE AS SHOWN ON BOX LID. TRIM CANOPY TO FIT, THEN PLACE ON WING AND DRAW OUTLINE WITH PENCIL. PAINT AREA UNDER CANOPY GRAY OR BLACK. 3/4" SLOT (NOT INCLUDED) SCALE EQUALS 1" IS CEMENTED IN PLACE, FOLLOWED BY CANOPY. INSTALL 2-1/2" WHEELS ON MAIN GEAR AND 2" WHEEL ON NOSE GEAR. WHEELS ARE NOT SUPPLIED. WHEELS SHOULD BE PARALLEL SO HOOKL TRACKS STRAIGHT. PLACE LANDING GEAR ON DOWELS IN BOTTOM OF FUSELAGE AND HOLD IN PLACE WITH RUBBER BANDS AS SHOWN IN SIDE DETAIL. SEW RUDDER R3 IN PLACE WITH FIGURE 8 STITCHES AS SHOWN IN BOTTOM DETAIL, SEW WHEEL ON NOSE GEAR WITH NUT ON OPPOSITE SIDE (FLAT SIDE TOWARD GEAR). TIGHTEN NUTS FIRMLY AGAINST WHEEL, LANDING GEAR IS INSTALLED ON DOWELS IN BOTTOM OF FUSELAGE. HOLD IN PLACE WITH RUBBER BANDS AS SHOWN IN STEP 7.

ESCAPEMENT TYPE RADIO INSTALLATION



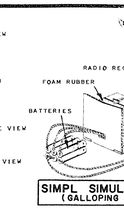
SIDE VIEW AND ADJOINING SKETCH SHOW INSTALLATION OF RADIO EQUIPMENT FOR RUDDER AND ENGINE CONTROL WHEN USED WITH FOX .15 R/C ENGINE ON SIMILAR TYPE, ENGINE AND RADIO EQUIPMENT NOT SUPPLIED. REGULAR ENGINE (NO THROTTLE CONTROL) MAY BE USED, IN WHICH CASE, OMIT THROTTLE ESCAPEMENT; CITIZEN-SHIP SC ESCAPEMENT MAY THEN BE SUBSTITUTED FOR BABCOCK. DRILL 1/8 HOLES AT PUNCH MARKS IN SM AND MOUNT BABCOCK ESCAPEMENT WITH 4/40 SCREWS AND NUTS, FLAT SIDE OF NUTS AGAINST SM. CUT TWO 3/16 SQ. X 1-1/2 STRIPS AND CEMENT TO SIDES OF FUSELAGE AT BOTTOM OF FUSELAGE AGAINST DOWEL AT F4, CEMENT SM PLACE, BOTTOM AGAINST 3/16 SQUARES, TOP AGAINST REAR OF NOTCHES IN F4 AS SHOWN IN STEP 6 SKETCH. REINFORCE INSTALLATION BY CEMENTING 3/16 SQUARES IN CORNERS OF BOTH SIDES AND FRONT & BACK OF SM. BEND WINDING ROD USING 1/16 WIRE (SEE SIDE VIEW), INSERT THROUGH REAR OF ESCAPEMENT AND SOLDER YOKE (PICK UP) IN PLACE AS DESCRIBED IN BABCOCK INSTRUCTIONS. SOLDER WASHER TO ROD FOR FORWARD ESCAPEMENT ONLY. BEND RUDDER YOKE FROM 1/32 WIRE USING PATTERN PROVIDED AND SECURE TO RUDDER WITH 2/56 SCREW AND NUT, FLAT SIDE OF NUT AGAINST YOKE. RUDDER MOVEMENT CAN BE INCREASED BY RAISING YOKE OR VICE-VERSA, BOLT 1/8 HOLES AND MOUNT ENGINE ESCAPEMENT ON SM1, CEMENT SM2*S UNDER C*S ON BOTH SIDES OF FUSELAGE, THEN CEMENT UNIT TO BOTTOM OF SM2*S (SEE SIDE E). REINFORCE WITH 3/16 SQUARES CEMENTED INTO CORNERS TOP & BOTTOM OF EACH SIDE. MAKE WINDING HOOK PLUG WH1 FROM 6-32 SCREW, USING 1/16 WIRE, BEND HALF OF HOOK AT RIGHT ANGLES TO SHANK OF SCREW. MAKE WH2, INSERT HOOK THROUGH, THEN BEND OTHER END AT RIGHT ANGLES. MAKE WH3 WINDING HOOK PLUG IN SAME MANNER USING 1/32 WIRE, CUT OFF BOTTOM OF HOOK AND BEND DIRECTLY UNDER ESCAPEMENT HOOK THE SAME SIZE AS WH3. CEMENT 1/16 X 3/16 (CUT FROM SCRAP) ACROSS END OF HOLE ON EACH SIDE TO PROVIDE BOTTOM FLAT FOR WH3. INSTALL ACTUATING RUBBER BETWEEN ESCAPEMENT HOOKS AND WINDING HOOKS. ASSEMBLE SWITCH MOUNT TO ST (SEE NOTE) THEN INSTALL SWITCH. RADIO RECEIVER IS PROTECTED WITH FOAM RUBBER 1/2" TO 1" THICK. CUT TO SIZE OF MOUNT A, THEN CEMENT TO CENTER OF ST WITH CONTACT CEMENT, FOLLOWED BY A. THE RADIO RECEIVER TO A WITH RUBBER BANDS AS SHOWN. SLIDE RADIO RECEIVER INTO SLIDE TRACKS AND NOTCH OUT BOTTOM OF FUSELAGE FOR SWITCH. EQUIPMENT IS NOW WIRED UP ACCORDING TO RADIO MANUFACTURER'S INSTRUCTIONS. BATTERIES ARE STORED IN COMPARTMENT UNDER TANK. SURFACE TEST EQUIPMENT, CHECK EQUIPMENT BEFORE EACH FLIGHT WITH ENGINE RUNNING.

WINDING HOOK PLUGS

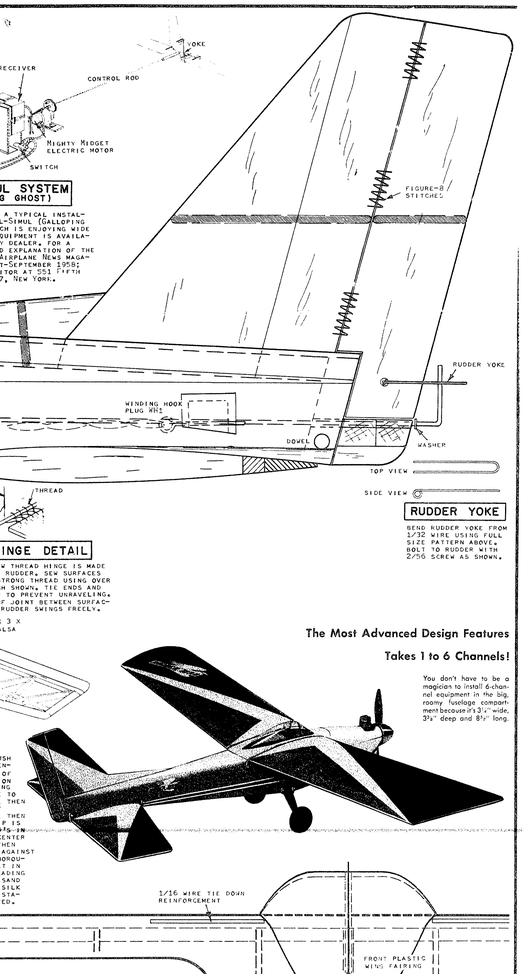


FULL SIZE HOOKS ABOVE ARE USED AS BENDING PATTERNS. USE 1/32 WIRE FOR WH3, 1/16 FOR WH1. NOTE WH2 BALSA FILLER CEMENTED TO WH1. FLATS ON HOOKS ARE SURFACE FOR CEMENTING IN POSITION AS SHOWN ABOVE. BEND HALF OF HOOK, PUSH THRU, BEND OTHER END, CEMENT.

SIMPL SIMUL SYSTEM (GALLOPING GHOST)



SKETCH ABOVE SHOWS A TYPICAL INSTALLATION OF SIMPL-SIMUL (GALLOPING GHOST) SYSTEM, WHICH IS ENJOYING WIDE POPULARITY. SOME EQUIPMENT IS AVAILABLE, ASK YOUR HOBBY DEALER. FOR A COMPLETELY DETAILED EXPLANATION OF THE SYSTEM, SEE MODEL AIRPLANE NEWS MAGAZINE OF JULY-AUGUST-SEPTEMBER 1958; OR WRITE TO THE EDITOR AT 551 FIFTH AVENUE, NEW YORK 17, NEW YORK.



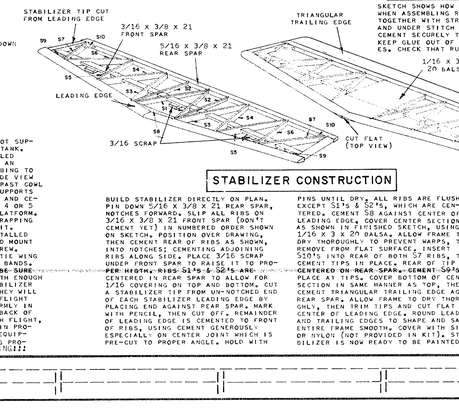
RUDDER YOKE

BEND RUDDER YOKE FROM 1/32 WIRE USING FULL SIZE PATTERN ABOVE. BOLT TO RUDDER WITH 2/56 SCREW AS SHOWN.

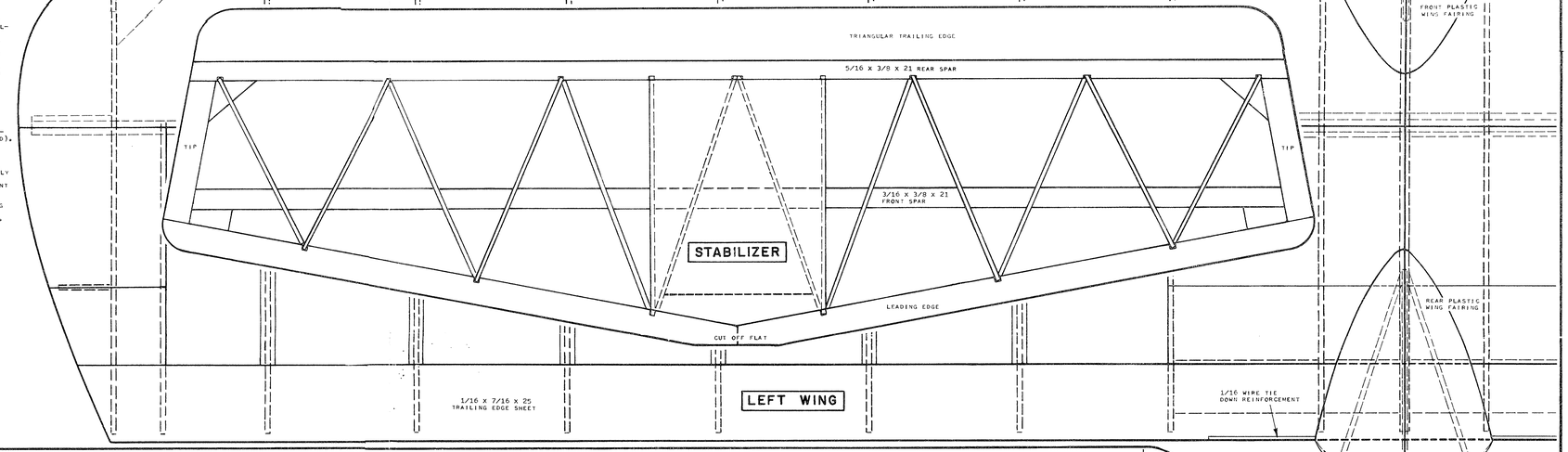
SEWN HINGE DETAIL

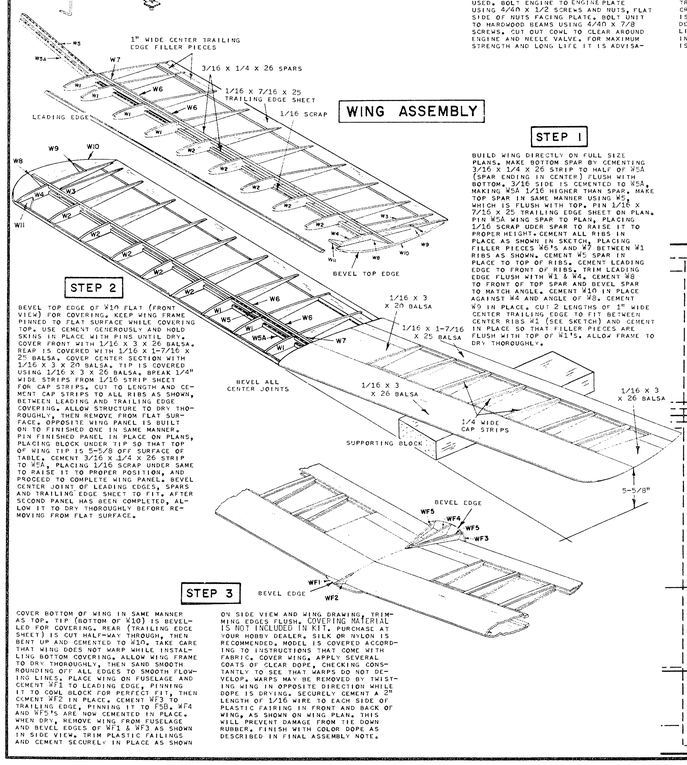
SKETCH SHOWS HOW THREAD HINGE IS MADE WHEN ASSEMBLING RUDDER. SEW SURFACES TOGETHER WITH STRONG THREAD USING OVER AND UNDER STITCH SHOWN. TIE ENDS AND CEMENT SECURELY TO PREVENT UNRAVELING. KEEP GLUE OUT OF JOINT BETWEEN SURFACES. CHECK THAT RUDDER SWINGS FREELY.

STABILIZER CONSTRUCTION



BUILD STABILIZER DIRECTLY ON PLAN. PIN DOWN 5/16 X 3/8 X 21 REAR SPAR, NOTCHES TOWARD TIP. SLIP ALL RIBS ON 3/16 X 3/8 X 21 FRONT SPAR (DON'T CEMENT YET) IN NUMBERED ORDER SHOWN ON SKETCH, POSITION OVER DRAWING, THEN CEMENT REAR OF RIBS IN PLACE, REMOVE FROM FLAT SURFACE, INSERT SPARS INTO REAR OF RIBS AS SHOWN, THEN CEMENT FRONT SPAR IN PLACE. REAR OF TIP IS CENTERED ON REAR SPAR, CEMENT SPAR IN PLACE AT TIPS. CUT BOTTOM OF CENTER SECTION IN SAME MANNER AS TOP, THEN CEMENT TRIANGULAR TRAILING EDGE AGAINST REAR SPAR, ALLOW FRAME TO DRY THOROUGHLY, THEN TRIM TIPS AND CUT FLAT ON CENTER OF LEADING EDGE. ROUND LEADING AND TRAILING EDGES TO SHAPE AND SAND ENTIRE FRAME SMOOTH. COVER WITH SILK OR NYLON (NOT PROVIDED IN KIT). STABILIZER IS NOW READY TO BE PAINTED.





STEP 1

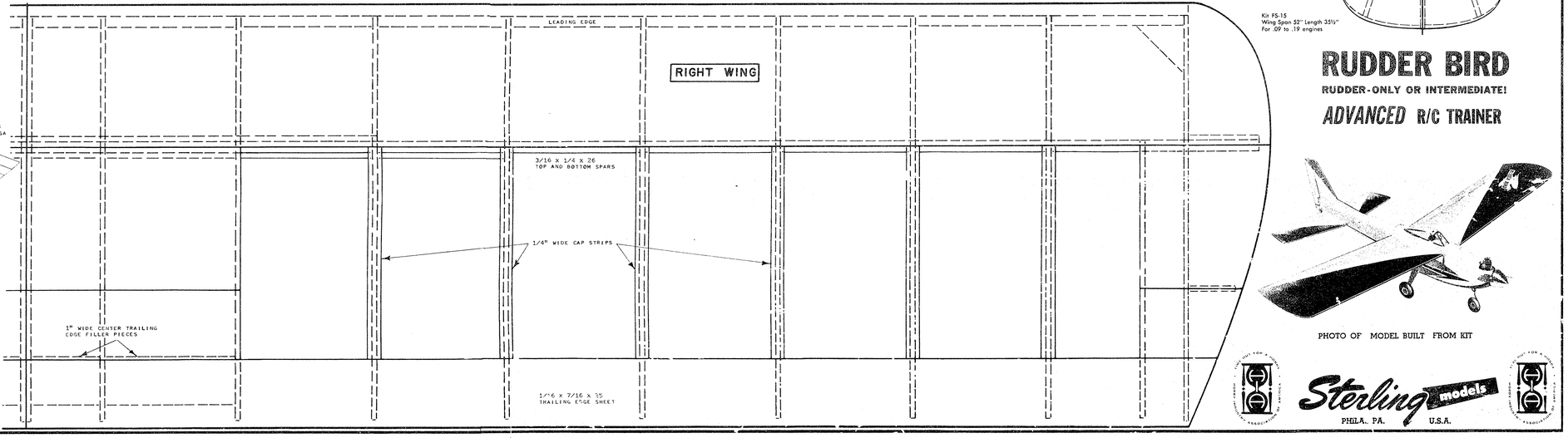
BUILD WING DIRECTLY ON FULL SIZE PLANS. MAKE BOTTOM SPAR BY CEMENTING 3/16 X 1/4 X 26 STRIP TO HALF OF W3A (SPAR ENDING IN CENTER) FLUSH WITH BOTTOM. 3/16 SIDE IS CEMENTED TO W3A, MAKING W3A 1/16 HIGHER THAN SPAR. MAKE TOP SPAR IN SAME MANNER USING W5, WHICH IS FLUSH WITH TOP. PIN 1/16 X 7/16 X 25 TRAILING EDGE SHEET ON PLAN. PIN W3A WING SPAR TO PLAN, PLACING 1/16 SCRAP UNDER SPAR TO RAISE IT TO PROPER HEIGHT. CEMENT ALL RIBS IN PLACE AS SHOWN IN SKETCH, PLACING FILLER PIECES W6*S AND W7 BETWEEN W1 RIBS AS SHOWN. CEMENT W5 SPAR IN PLACE TO TOP OF RIBS. CEMENT LEADING EDGE TO FRONT OF RIBS. TRIM LEADING EDGE FLUSH WITH W1 & W4. CEMENT W8 TO FRONT OF TOP SPAR AND BEVEL SPAR TO MATCH ANGLE. CEMENT W10 IN PLACE AGAINST W4 AND ANGLE OF W8. CEMENT W9 IN PLACE. CUT 2 LENGTHS OF 1" WIDE CENTER TRAILING EDGE TO FIT BETWEEN CENTER RIBS #1 (SEE SKETCH) AND CEMENT IN PLACE SO THAT FILLER PIECES ARE FLUSH WITH TOP OF W1*S. ALLOW FRAME TO DRY THOROUGHLY.

STEP 2

BEVEL TOP EDGE OF W10 FLAT (FRONT VIEW) FOR COVERING. KEEP WING FRAME PINNED TO FLAT SURFACE WHILE COVERING TOP. USE CEMENT GENEROUSLY AND HOLD SKINS IN PLACE WITH PINS UNTIL DRY. COVER FRONT WITH 1/16 X 3 X 26 BALSA. REAR IS COVERED WITH 1/16 X 1-7/16 X 25 BALSA. COVER CENTER SECTION WITH 1/16 X 3 X 20 BALSA. TIP IS COVERED USING 1/16 X 3 X 26 BALSA. BREAK 1/4" WIDE STRIPS FROM 1/16 STRIP SHEET FOR CAP STRIPS. CUT TO LENGTH AND CEMENT CAP STRIPS TO ALL RIBS AS SHOWN, BETWEEN LEADING AND TRAILING EDGE COVERING. ALLOW STRUCTURE TO DRY THOROUGHLY, THEN REMOVE FROM FLAT SURFACE. OPPOSITE WING PANEL IS BUILT ON TO FINISHED ONE IN SAME MANNER. PIN FINISHED PANEL IN PLACE ON PLANS, PLACING BLOCK UNDER TIP SO THAT TOP OF WING TIP IS 5-5/8 OFF SURFACE OF TABLE. CEMENT 3/16 X 1/4 X 26 STRIP TO W3A, PLACING 1/16 SCRAP UNDER SAME TO RAISE IT TO PROPER POSITION, AND PROCEED TO COMPLETE WING PANEL. BEVEL CENTER JOINT OF LEADING EDGES, SPARS AND TRAILING EDGE SHEET TO FIT. AFTER SECOND PANEL HAS BEEN COMPLETED, ALLOW IT TO DRY THOROUGHLY BEFORE REMOVING FROM FLAT SURFACE.

STEP 3

COVER BOTTOM OF WING IN SAME MANNER AS TOP. TIP (BOTTOM OF W10) IS BEVELLED FOR COVERING. REAR (TRAILING EDGE SHEET) IS CUT HALF-WAY THROUGH, THEN BENT UP AND CEMENTED TO W10. TAKE CARE THAT WING DOES NOT WARP WHILE INSTALLING BOTTOM COVERING. ALLOW WING FRAME TO DRY THOROUGHLY, THEN SAND SMOOTH ROUNDING OFF ALL EDGES TO SMOOTH FLOWING LINES. PLACE WING ON FUSELAGE AND CEMENT WF1 TO LEADING EDGE, PINNING IT TO COWL BLOCK FOR PERFECT FIT, THEN CEMENT WF2 IN PLACE. CEMENT WF3 TO TRAILING EDGE, PINNING IT TO F5B. WF4 AND WF5*S ARE NOW CEMENTED IN PLACE. WHEN DRY, REMOVE WING FROM FUSELAGE AND BEVEL EDGES OF WF1 & WF3 AS SHOWN IN SIDE VIEW. TRIM PLASTIC FAIRINGS AND CEMENT SECURELY IN PLACE AS SHOWN ON SIDE VIEW AND WING DRAWING. TRIM WING EDGES FLUSH, COVERING MATERIAL IS NOT INCLUDED IN KIT. PURCHASE AT YOUR HOBBY DEALER. SILK OR NYLON IS RECOMMENDED. MODEL IS COVERED ACCORDING TO INSTRUCTIONS THAT COME WITH FABRIC, COVER WING, APPLY SEVERAL COATS OF CLEAR DOPE, CHECKING CONSTANTLY TO SEE THAT WARPS DO NOT DEVELOP. WARPS MAY BE REMOVED BY TWISTING WING IN OPPOSITE DIRECTION WHILE DOPE IS DRYING. SECURELY CEMENT A 2" LENGTH OF 1/16 WIRE TO EACH SIDE OF PLASTIC FAIRING IN FRONT AND BACK OF WING, AS SHOWN ON WING PLAN. THIS WILL PREVENT DAMAGE FROM TIE DOWN RUBBER. FINISH WITH COLOR DOPE AS DESCRIBED IN FINAL ASSEMBLY NOTE.



Kit FS-15
Wing Span 52" Length 35½"
For .09 to .19 engines

RUDDER BIRD

RUDDER-ONLY OR INTERMEDIATE!

***ADVANCED* R/C TRAINER**

PHOTO OF MODEL BUILT FROM KIT

Sterling models
PHILA. PA. U.S.A.