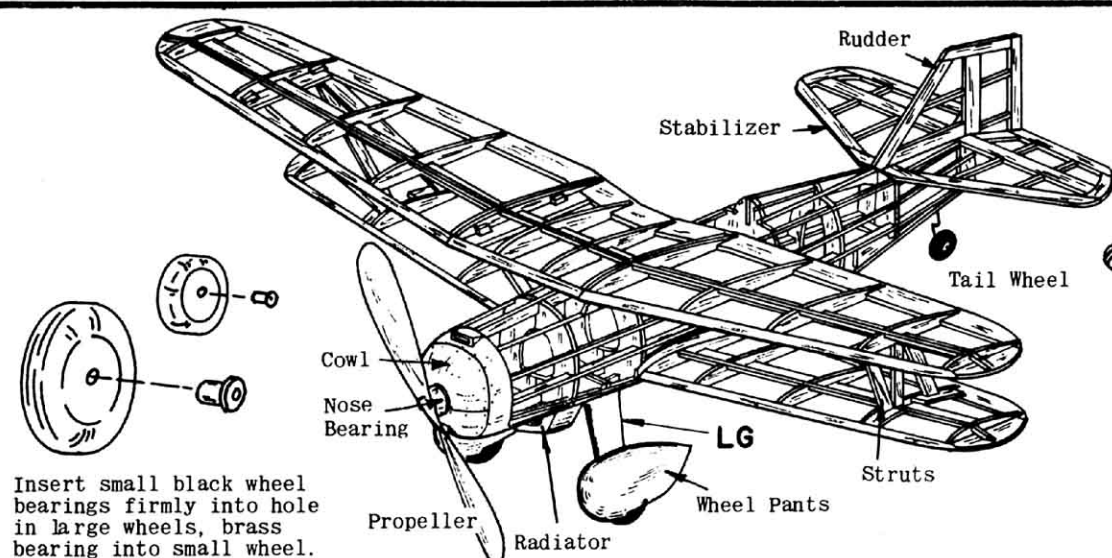
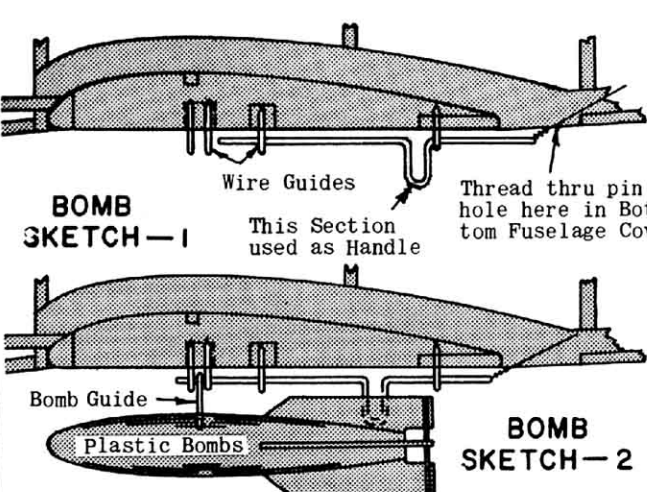
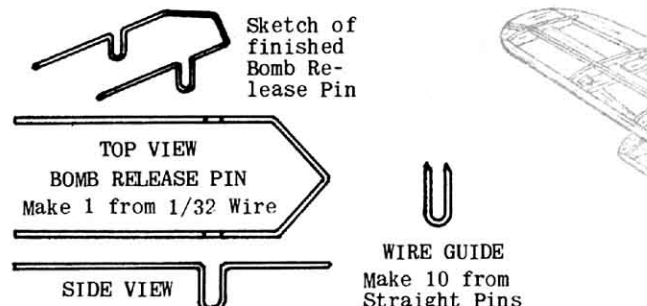




FINAL ASSEMBLY

Wings, tail and fuselage are covered before starting this step. Cement bottom wing securely into fuselage against bulkhead F3, and into step in center and side keels. **PRESS WING TIGHTLY AGAINST BOTTOM OF KEELS TO INSURE PROPER INCIDENCE, OTHERWISE MODEL MAY NOT FLY!** Hold with pins until dry. It is necessary to have access to rear hook for rubber motor. Cut out stringer above side keel L6 on right side between F6 and F7. Fit piece of 1/16 balsa into space. Cement cloth tape to top (half over door and half over fuselage) to act as hinge. Cement a strip of 1/16 square to L6 to act as door stop, to keep door flush with surface. Hold bottom in place with Scotch Tape. Cement stabilizer horizontally in place. Cement rudder to top of stabilizer and against rear of fuselage. **ALIGNMENT OF LOWER WING AND TAIL SURFACES IS NOW CHECKED.** Tips are equal distance from flat surface when model is at rest, rudder is vertical. Cut out bottom fuselage cover from stiff paper using pattern on plan, then cement in place between rear of lower wing and F5. Insert bomb release thread through pin hole. Bomb release mechanism can now be completed as described in detail note. Make wing struts as described in detail note, then cement bottom of struts only (not SA's since they are later removed) into notches in lower wing. **PUSH DOWN FIRMLY UNTIL SA'S REST ON WING TO provide proper angle of incidence, OTHERWISE MODEL MAY NOT FLY!** Note that top of struts angle outward to fit in strut gussets on top wing. Put top wing in position, inserting struts through bottom of gussets. **PRESS DOWN FIRMLY UNTIL WING RESTS ON TOP STRIP TO maintain proper angle of incidence, OTHERWISE MODEL MAY NOT FLY!** Use cement on struts only, strip and SA's are later removed after struts are dry. Make two center sec-

tion strut assemblies. Insert top into strut gussets of top wing, bottom of struts swing inwards and are cemented to stringer on fuselage. Allow model to dry thoroughly, checking that both wing tips are same height from flat surface. When dry, remove SA's and horizontal strips from strut assemblies. Round off landing gear strut LG's to cross section shown and make groove (with pencil point) for wire struts 1/16 from front as shown on side view. Cement both LG's securely in place as shown, wrapping entire strut with silkspan for maximum strength. Assemble and trim all plastic parts, see detail note. Model is now painted. For scale colors, see three view drawings or box top. For best flight performance, use a minimum of color dope. Apply decals by dipping in water and sliding off into position. Cut instrument panel from plan and cement to F4. Cement all plastic parts in place as described in detail note. Outlines of scale control surfaces may be drawn in place with India Ink. Bend windshield at crease marks and cement to front of cockpit as shown on side view. Insert bearings into wheels and assemble with wheel pants as described in Plastic Parts Detail. Insert straight end of propeller shaft through rear of nose bearing. Slip on two washers and insert shaft through rear of propeller. Bend front of shaft to "U" shape as shown on side view and cement securely to propeller. Make two loops of rubber. Insert rubber through trap door and engage on rear hook. Slip remainder of rubber into fuselage and shake down towards nose. Bend hook on piece of wire. Slip wire through nose bearing hole in cowl and capture rubber. Pull through and attach to prop shaft. Nose bearing fits into cowl. Your Hawk P-6E is now complete. See Flight Instructions before flying. **GOOD LUCK AND HAPPY LANDINGS!!!**

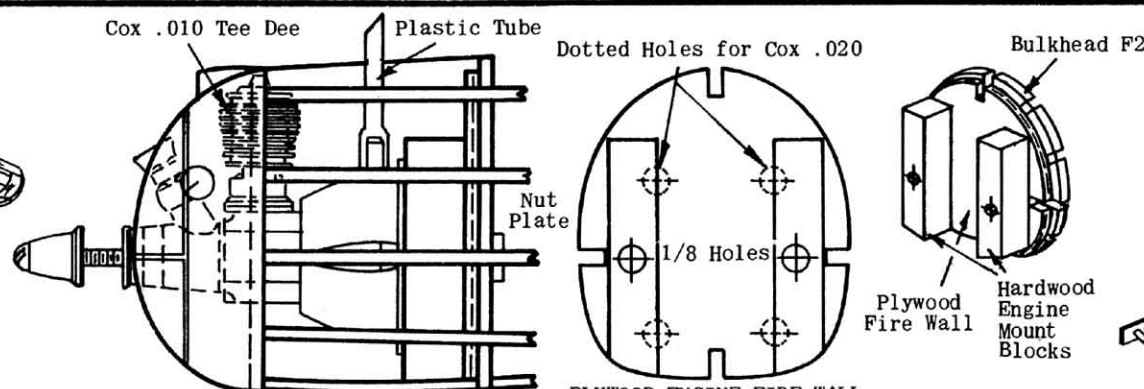


BOMB RELEASE DETAIL

Prepare installation by bending ten wire guides from straight pins; bend bomb release pin from 1/32 wire, using full size patterns above. Cement eight wire guides in exact position shown above, and on full size bottom wing drawing. All guides must be the same level, about 1/8" below bottom of ribs as shown, and bomb release pin must enter freely. Sketch #1 shows bomb release pin handle at rear guide when motor is unwound and rear hook is in vertical position. Thread should now be snug as originally installed. Sketch #2 shows position of bomb release pin when motor is wound and rear hook is in horizontal position. This loosens the thread permitting front of bomb release pin to be slid through wire guides on bomb and front guides on model, holding bombs in place. Sketch #2 is also used as location for cementing wire guides in bombs as described in Plastic Parts Detail. When motor unwinds, hook pulls back to vertical position, pulling release pin out of the front guides, dropping both bombs at the same time.

BOMB INSTALLATION

Automatic bomb dropping in flight operates on rubber powered motors only. Installation is simple and action is positive if directions are followed carefully. Make hole and cement eyelet in center of bulkheads F5 and F6, directly over keel. Bend ten "U" shaped guides from straight pins, using pattern provided. Bend bomb release pin from 1/32 wire, using full size pattern. Cement the four guides in place to center bottom of wing as shown in bomb release sketch #1. Assemble bombs as described in Plastic Parts Detail and cement wire guides in place as shown. Insert a length of thread through eyelets and tie securely to rear hook as shown above and side view. Coat knot with cement. Insert thread through hole in stiff paper lower fuselage cover. Insert bomb release pin through wire guides, then securely tie thread to hook, with bomb release pin handle against rear wire guides as shown. Thread must be snug when release pin is in this position. Coat knot on release pin with cement, which completes mechanism. To operate: Wind rubber motor. This will pull rear hook forward to a horizontal position, loosening thread. This now permits release pin to be slid forward, through front wire guides to position shown in Sketch #2; while at the same time engaging bombs through their wire guides. Push pin forward until line is snug. Mechanism should now look exactly as drawn in Bomb Sketch #2. Bombs are now loaded. Model is now released, and towards the end of flight when motor unwinds, rear hook pulls back into vertical position. This tightens the lines, pulling release pin back past second guide, which releases and drops bombs. **GOOD HUNTING!!!**

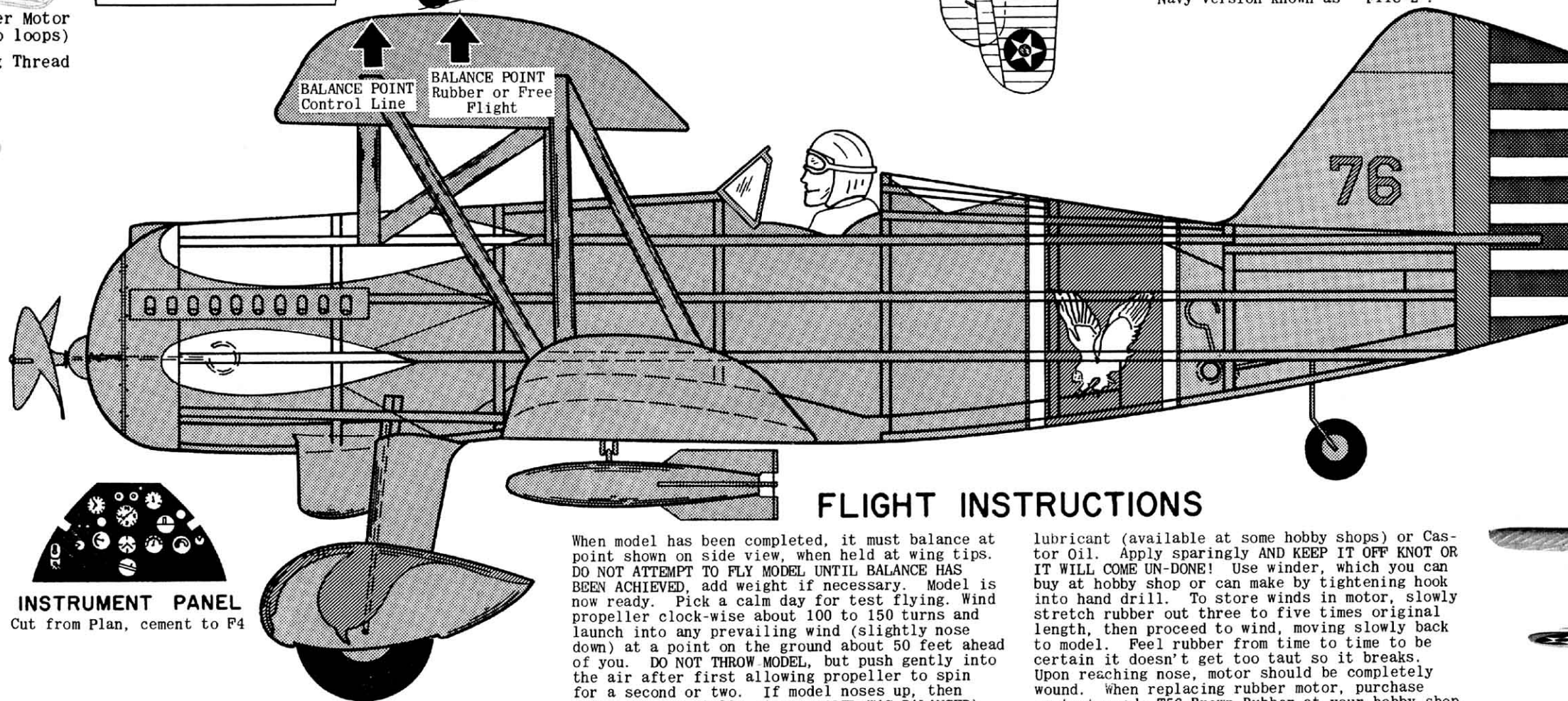


ENGINE INSTALLATION

Engine is used, if model is being built for control line or free flight flying. Engine and installation material is not provided in kit. Drawing shows the installation of Cox .010 Tee Dee engine, which is suitable for both control line and free flight. The .020 Tee Dee and similar size engines can be used for control line only, if more power is desired. Fuselage should be covered, at least back to F3, with 1/32 or 1/16 sheet balsa. Cowl and F1 are both cut out for engine clearance. Obtain a piece of 1/16 plywood and cut out engine fire wall, using full size drawing. Cut two engine mount blocks 1/4 x 5/16 x 1-1/4 from hardwood. Cement securely to plywood fire wall in position shown. When dry, drill 1/8" holes through center of blocks and fire wall as shown. The other four holes shown are for Cox .020 engine. Mount engine to fire wall with #2 nuts and bolts, tightening nuts securely. Cut plastic nut plates from molded sheet and cement to back of fire wall, over nuts. Drill hole so that bolts can protrude. Use cement generously. Nut plate keeps nuts from turning so that engine can be removed by just unscrewing bolts. When dry, remove engine. Securely cement fire wall to front of F2. Cut molded engine cowl from plastic sheet as described in detail note and fit over F1. Trim out front and top of cowl where necessary for cooling. Make needle valve extension by forcing a length of 1/8 I.D. plastic fuel tubing over head of needle valve, then forcing a length of 1/8 dowel into end of tubing. Dowel should protrude about 1/2" past cowl. Cut 1/16 I.D. plastic tubing for filler and overflow, and force tubing over tubes in fuel tank. Tubing should extend about 1/4" past fuselage, and top should be cut at angle facing forward for easy admission of air stream. After model and cowl have been painted, install engine through enlarged hole in F1, then cement cowl in place. If it becomes necessary to remove engine for any reason, cowl glue-joint is broken carefully and then replaced in same manner. Cowl can also be made removable by cementing small blocks to F1 which receive tiny wood screws through cowl.

CAUTION:

Do not fly control line models in the vicinity of electric power lines!



INSTRUMENT PANEL

Cut from Plan, cement to F4

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FLIGHT INSTRUCTIONS

When model has been completed, it must balance at point shown on side view, when held at wing tips. **DO NOT ATTEMPT TO FLY MODEL UNTIL BALANCE HAS BEEN ACHIEVED,** add weight if necessary. Model is now ready. Pick a calm day for test flying. Wind propeller clockwise about 100 to 150 turns and launch into any prevailing wind (slightly nose down) at a point on the ground about 50 feet ahead of you. **DO NOT THROW MODEL,** but push gently into the air after first allowing propeller to spin for a second or two. If model noses up, then falls off and stalls (**AFTER MODEL WAS BALANCED**), then bend elevators down slightly, using breath in same manner as steam, described in Covering Note. If model dives, bend elevators up. If model veers too much to one side, bend rudder to opposite side. Take-offs require more power and therefore more turns in rubber motor. For longer flights and contest flying, it is recommended that the loops of rubber be lubricated with model

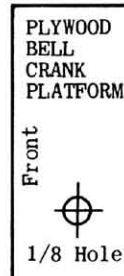
lubricant (available at some hobby shops) or Castor Oil. Apply sparingly and **KEEP IT OFF KNOT OR IT WILL COME UN-DONE!** Use winder, which you can buy at hobby shop or can make by tightening hook into hand drill. To store winds in motor, slowly stretch rubber out three to five times original length, then proceed to wind, moving slowly back to model. Feel rubber from time to time to be certain it doesn't get too taut so it breaks. Upon reaching nose, motor should be completely wound. When replacing rubber motor, purchase contest grade T56 Brown Rubber at your hobby shop. Engine powered free flight models are tested and flown in same basic manner as above, with engine at lowest possible speed until model is adjusted to fly properly. If model glides well but stalls under power, point front of engine down (down thrust) by placing washers behind top of tank or where necessary. Engine speed then can be slowly increased. **GOOD LUCK AND GOOD FLYING!!!**

PLASTIC PARTS DETAIL

For best results, follow instructions carefully. **PILOT:** Cut halves from plastic sheet, leaving about 1/16 excess material. Carefully cut out slots on excess material (about 1/8" wide) on top, bottom and both sides, right to the edge of the pilot itself as shown. This will permit accurate assembly of halves. Cement halves together, lining up carefully at slots. Use plastic or model airplane cement when assembling and attaching plastic parts in place. **USE SPARINGLY,** since excessive use of cement may distort the plastic. After assembly is thoroughly dry, trim and sand off smooth. After painting (first read Paint Instructions at end of this note) pilot is cemented in cockpit as shown in side view. **WHEEL PANTS:** Cut halves from plastic sheet in same manner as pilot, leaving excess material and making slots for assembly. Make pin hole for axle, then place wheel in wheel-pant (after inserting wheel bearings) and insert axle through wheel-pant, engaging wheel at same time. Wheel-pant is securely cemented to strut LG and to axle protruding on outside of wheel-pant. **BOMBS:** Cut out of sheet in same manner as pilot, making notches in excess material for assembly. Cement halves together. When thoroughly dry, trim and sand smooth, then cut out 4 bomb fins each which are scribed on

plastic sheet. Cement fins to ends of bomb at right angles, along seams as shown. Make two pin holes in each bomb and cement "U" shaped guide (see Bomb Release Detail Sketch #2) securely in place. **EXHAUST STACKS:** Cut from sheet, trim, then cement in position shown on side view. **NUT PLATES:** Cut from sheet and install behind F2 as described in Engine Installation. **RADIATOR:** Cut from sheet and trim smooth. Cement to bottom of fuselage in position shown on side view. **COWL:** Cut from sheet, leaving about 1/16 excess material. Trim excess material carefully and sand smooth. Cowl may be placed on F1 for support while trimming and sanding. Install as described in Final Assembly or Engine Installation. **PAINTING:** Use regular plastic model paint or enamel. Model airplane dope can be used **ONLY IF APPLIED IN LIGHT SPRAY COATS,** allowing paint to dry thoroughly between coats. Excessive use of dope may deform plastic. Parts may be used red. If painting a lighter color, apply a light coat of silver, followed by a light coat of white, before painting final color. Darker colors may be applied directly to red plastic. When cementing parts in place on model, use light coats of cement applied **SPARINGLY.** If necessary, use more than one coat, but **DO NOT APPLY A THICK COAT AT ANY TIME.**

CONTROL LINE INSTALLATION



Materials required for control line installation are not provided in kit. **INSTALL CONTROLS AFTER FUSELAGE STEP 4 HAS BEEN COMPLETED.** Obtain 1/16 plywood and cut out bell crank platform, using drawing provided; drilling hole indicated. Fill in area between F2 and F4, from side keel L6 to stringer above it; with scrap 1/16 sheet balsa flush with outside of frame. Cover area between bulkhead F7 and rear, and between stringers as shown in sketch in same manner. Cut 1/8 slot in rear covering for control rod as shown. Mount 1/2" bell crank to plywood platform as described in instructions that come with bell crank. Cut two 15" lengths of lead-out lines and fasten them to bell crank. Cement platform securely in fuselage, against front of F3, and top of L6's. Lead-out lines come through fuselage at holes drilled for them in covering as shown. Use cement generously, applying at least two coats on entire installation. Cover fuselage with tissue as described in detail note. Cut stabilizer in half through wide main spar as shown by dotted lines on full size drawing. Round edges and install control horn at location shown on drawing, then join together with cloth hinges shown. Cement stabilizer horizontally to top rear of fuselage. Tape elevators in neutral position (in line with stabilizer, neither up or down). Obtain a piece of 1/16 music wire at least 12" long for control rod, and bend 1/4" of one end at right angle. Loosen bell crank and insert rod from bottom, with spur vertical, then secure bell crank. Rod rests on plywood platform and should be in line with elevator horn; if not, bend accordingly so that rod slides through slot freely. Make a right angle bend at rear end of rod at the exact location of hole in elevator horn, with bell crank in neutral position as shown. Clip off excess wire and insert into horn. Solder washer on end to prevent rod from coming off. Controls are now in neutral position. Remove tape from elevator and check that controls work freely and easily. Cut rudder in half through wide rudder post as shown by dotted lines on full size drawing. Cement together with rudder angled 1/2" to right side as shown above. Cement rudder to top of stabilizer and against rear of fuselage. Cement wings to fuselage as described in Final Assembly Detail. Make wing guides from 3/32 balsa, drilling holes indicated. Cement securely to struts. Reinforce holes in fuselage and wing guide with washers or eyelets. Thread lines through holes in wing guide and tie loops in end of lines at least 2" past top wing tip. Lines must be of equal length when elevator is in neutral position. **CAUTION: MODEL MUST BALANCE (OR BE SLIGHTLY NOSE DOWN) AT POINT SHOWN ON SIDE VIEW FOR CONTROL LINE!** If necessary, add weight. Use regular 1/2A control lines and handle when flying your Hawk P-6E. **GOOD LUCK AND GOOD FLYING!!!**

DROPS BOMBS

AUTOMATICALLY!

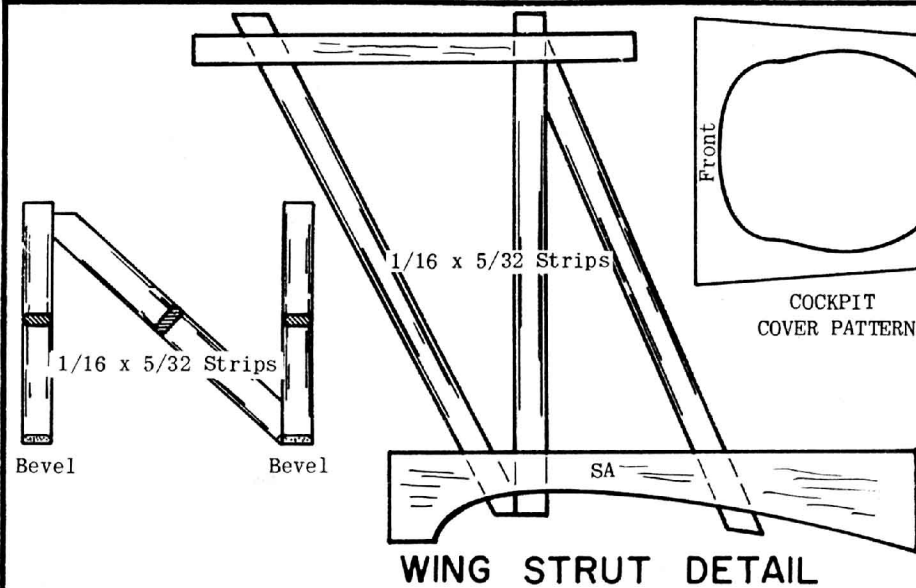
CURTISS HAWK P-6E



Sterling
MODELS
PHILA. PA. USA

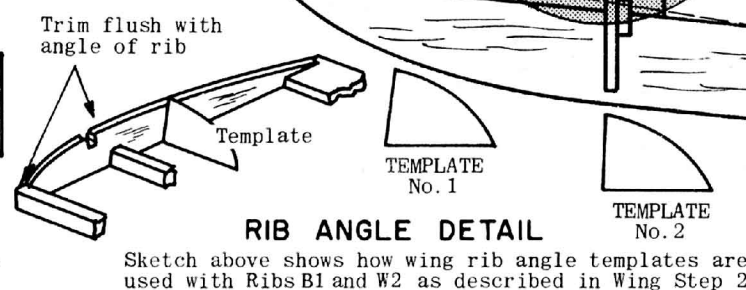
KIT A10
WING SPAN 16"

N2AJ4



WING STRUT DETAIL

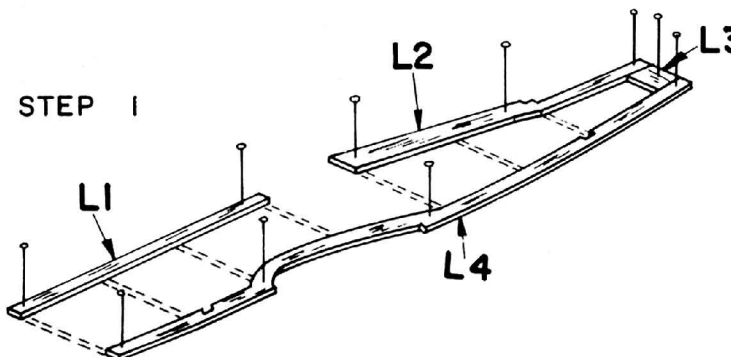
Use 1/16 x 5/32 strips for entire frame of both strut assemblies, except bottom which is die cut part SA. Round off strips to cross section shown. Cut strips to exact size and shape, then cement together over full size layout. Make two assemblies of each. ASSEMBLIES MUST BE EXACTLY AS DRAWN, OTHERWISE MODEL MAY NOT FLY.



RIB ANGLE DETAIL

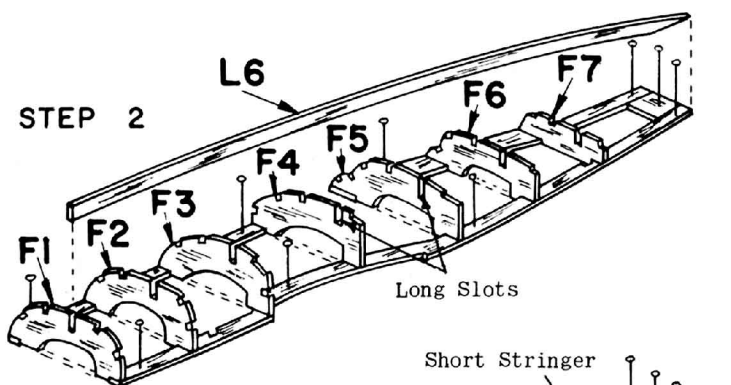
Sketch above shows how wing rib angle templates are used with Ribs B1 and W2 as described in Wing Step 2.

FUSELAGE ASSEMBLY



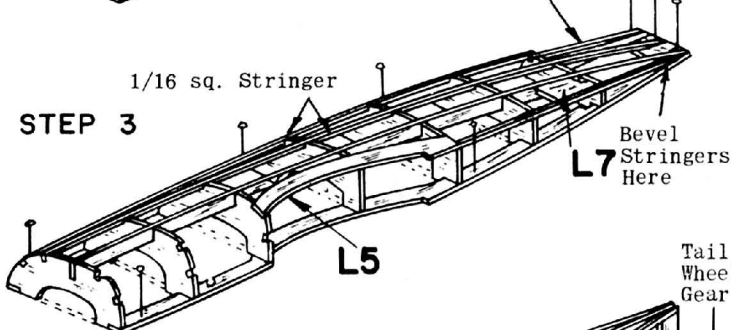
STEP 1

Build fuselage directly on plan. Pin L parts in place as shown, cementing where they join at rear.



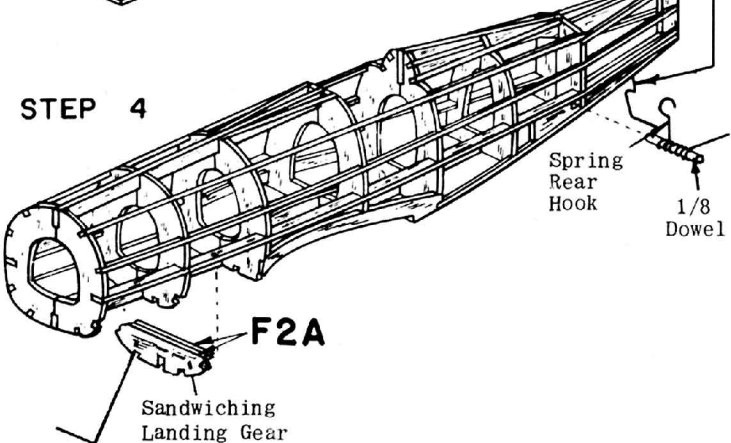
STEP 2

Cement bulkhead halves from F1 to F7 vertically in place as shown, then insert and cement L6 into long slots in center of bulkheads. Pin and cement L5 into notches from F3 to F5. Cement the 1/16 strip (stringer) from the top corner notch in F7 to rear, bevelling to knife edge at rear. Stringer is flush with top of L2. Complete this stringer from F1 to F7, rear rests on top of short stringer. Stringer above is cemented from F5 to front of F7 (no notch provided) flush with top of bulkhead, against L2. Short stringer above is cemented in place in same manner from F5 to front of F6. Cement remaining stringers in place into notches as shown, except bottom front stringer which is installed later. Stringers not visible can be seen in Step 4 Sketch. Cement L7 against front of F7 between L6 and bottom stringers. All stringers are bevelled to knife edge at rear. Allow frame to dry overnight to prevent warping. Wing or tail can be started meanwhile.

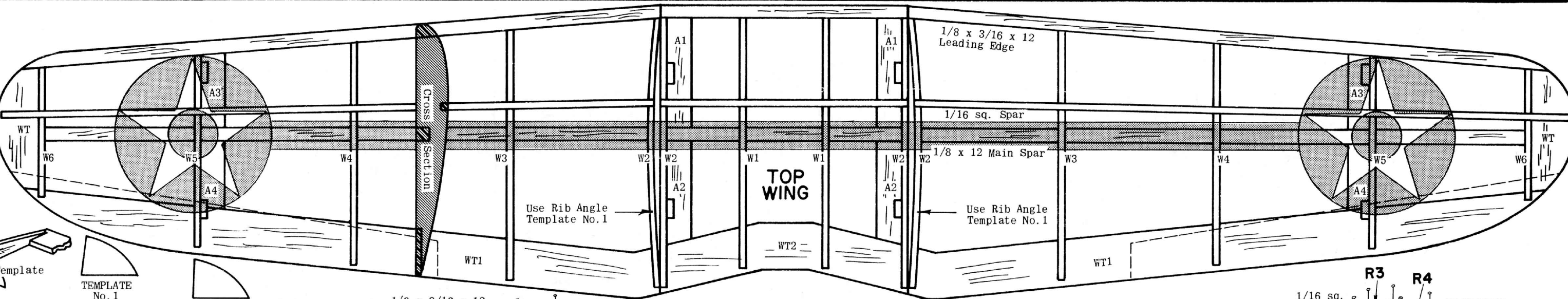
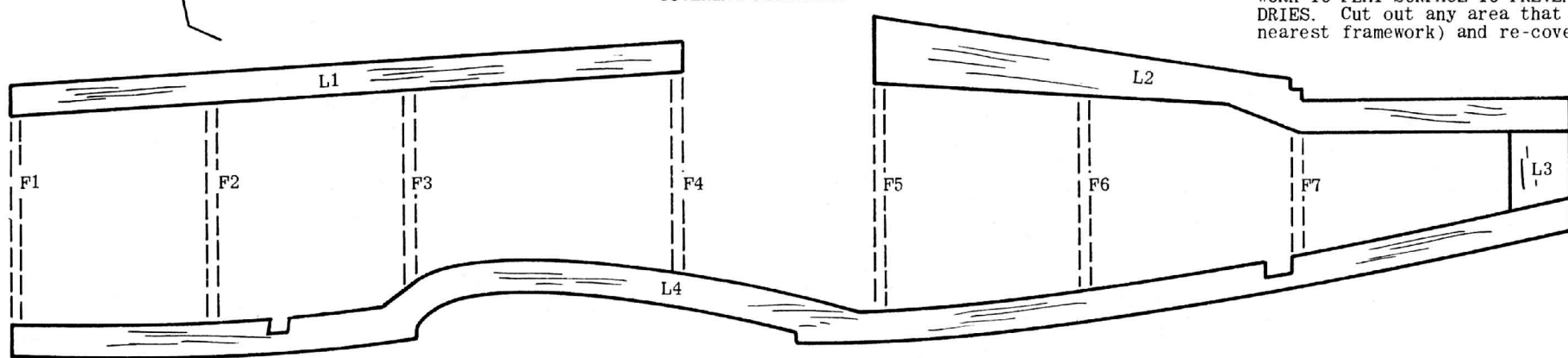


STEP 3

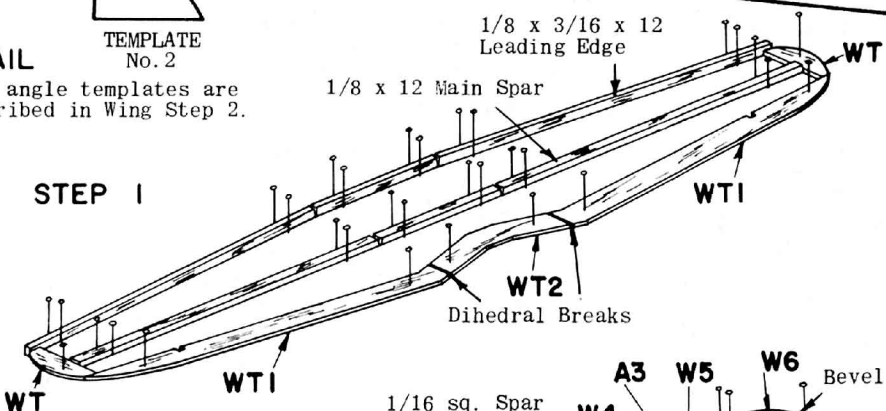
Pull out pins and remove frame from flat surface, then cement opposite halves of bulkheads in place, followed by L6. Install L5, followed by stringers; then add L7. Insert 1/8 dowel through coil of spring rear hook. (Omit rear hook on engine powered models). Bend hook part half the distance to opposite side so that hook is in center of fuselage (top view) when installed. Slip unit into fuselage, inserting ends of dowel into L7's and cement securely. Straight end of spring rear hook is securely cemented to side keel L6. Only straight end of hook is fastened, leaving coil free for spring movement. Bend 1/8 spur on straight end of tail wheel gear. Sink spur into top of L4 against bulkhead F7 as shown on side view. Remainder of tail gear is cemented to side of L4. Sandwich landing gears between two F2A's. Landing gear straddles side notches. Use cement generously when units are assembled and squeeze together or hold tightly with pins until absolutely dry. If model is engine powered, it is recommended that landing gear be duplicated with 1/16 music wire (not provided) and installed in same manner. Notch out F2A's if necessary. When assembly is dry, place in fuselage over L4 and cement securely into notch behind F2. Note that landing gear is on slight forward angle. Allow to dry, then add bottom stringers. Frame is now complete. Allow to dry thoroughly, then sand lightly to present a smooth surface for tissue covering, which is described in its detail note. If model is engine powered, see Engine or Control Line Note, BEFORE COVERING FUSELAGE.



STEP 4



TOP WING ASSEMBLY



STEP 1

