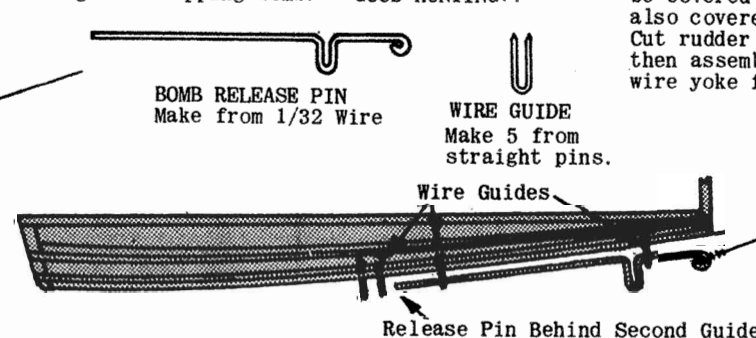


## BOMB RELEASE OPERATION

Use cement sparingly or it may deform the plastic. Cement wheel covers LG to outside of wire landing gear struts as shown on sketch and side view. Model is now painted. If it is to be painted, use black paint and black primer. Box top. For best flight performance, use a minimum of color dope. Apply decals by dipping in water and sliding off into position shown. Cut inst. 10. Paint propeller and landing gear. Make cowling in cockpit. Cement all plastic parts in place as described in detail note. Paint pilot and rubber parts. Make canopy antenna base from scrap Balza. Paint and cement to top of canopy. Outlines of scale control surfaces can be drawn on with India ink. Cement in place. Paint and cement landing gear on axles. Secure by bending up end of axles or with drop of cement or solder. Insert straight end of propeller shaft thru rear of nose bearing. Cement in place. Cement in place. Cement to thru back of propeller. Bend front of shaft to U shape as shown on side view and cement securely to propeller. The end of rubber securely to wheel hub. Cement in place. Cement in place. Prevent fraying. Double up to make two loops. Insert rubber thru trap door and engage on rear bearing. Cement in place. Make hook on end of wire. Shake down towards nose. Make hook on end of a piece of wire. Slip wire thru nose bearing hole in cowling and capture rubber on hook. Pull thru cowling and cement in place. Cement in place. Cement bearing fits into center hole in cowling. Your Focke-Wulf 19 is now complete. See Flight instructions before flying. GOOD LUCK AND HAPPY

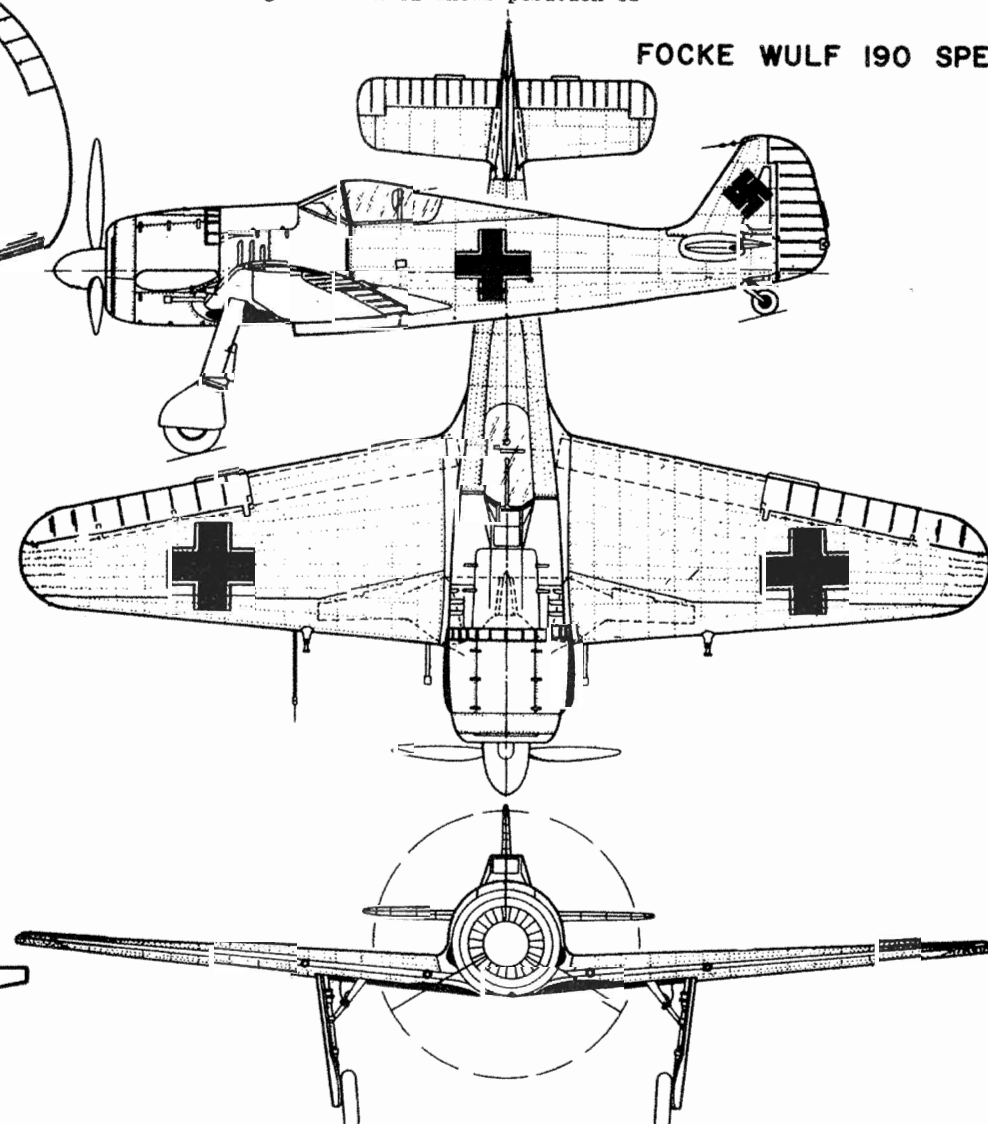
tie thread to hook. Front of release pin is in line with second guide as shown. When thread is snug as shown in Bomb Sketch #1. Coat knot on release pin with cement. This completes mechanism. To operate, wind rubber motor. This will pull release hook forward from a vertical to a horizontal position. As position changes, the thread now permits release pin to go forward past front guide to position shown in Sketch #2. Hold bomb in place between first two guides and insert pin. When front guide, engaging bomb at same time. Push pin down until it is past second guide. Now loaded. Model is now released & towards the end of the flight, when motor unwinds, rear hook pulls back into a vertical position, tightening the line. This will cause pin past second guide, releasing and dropping the bomb. (Sketch #3)



## BOMB RELEASE INSTALLATION

Prepare installation by bending 5 wire guides from pins and motor release pin from 1/32 wire using full size patterns shown. Cent 1/8 wire guides in exact position as shown on Sketch #1, centering over joint between L9's. All guides must be the same level, about 1/8 below bottom of L9's as shown. Sketch #1 shows front of bomb release pin at second guide when motor is unwound and rear hook is in vertical position, and thread snug. Sketch #2 shows position of

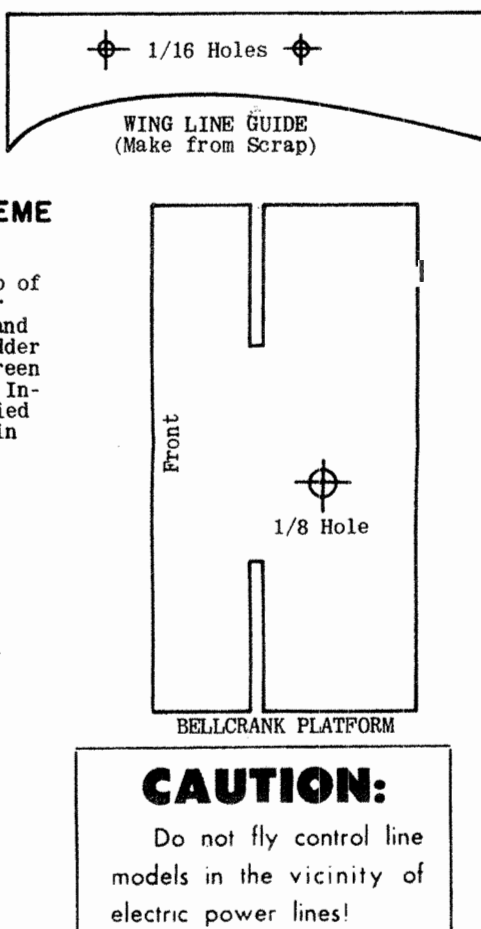
bomb release pin when motor is wound, and rear hook is in horizontal position. Thread is now loose, permitting front of release pin to be inserted thru guide on bomb and front guide, securing bomb in place. Sketch #2 is also used for location of guide in bomb, as described in Plastic Parts Detail. When motor unwinds, hook pulls back to vertical position, pulling release pin out of front two guides, releasing bomb.



**COLOR SCHEME:**  
Painting on box lid is authentic. Top of fuselage, wing and stab were irregular camouflaged areas of alternate light and dark green. Sides of fuselage and rudder were sand color with mottled medium green patches. Bottom was a light sky blue. Individual markings and decorations varied with the squadron and pilot. Decals in kit are authentic.

Specifications varied widely in all aspects. Armament, engine, etc. changes altered the shape of the fuselage. Constant design changes also altered shape of tail, wings & tips, and even wing span. Specifications below are for model Fw 190A-8.

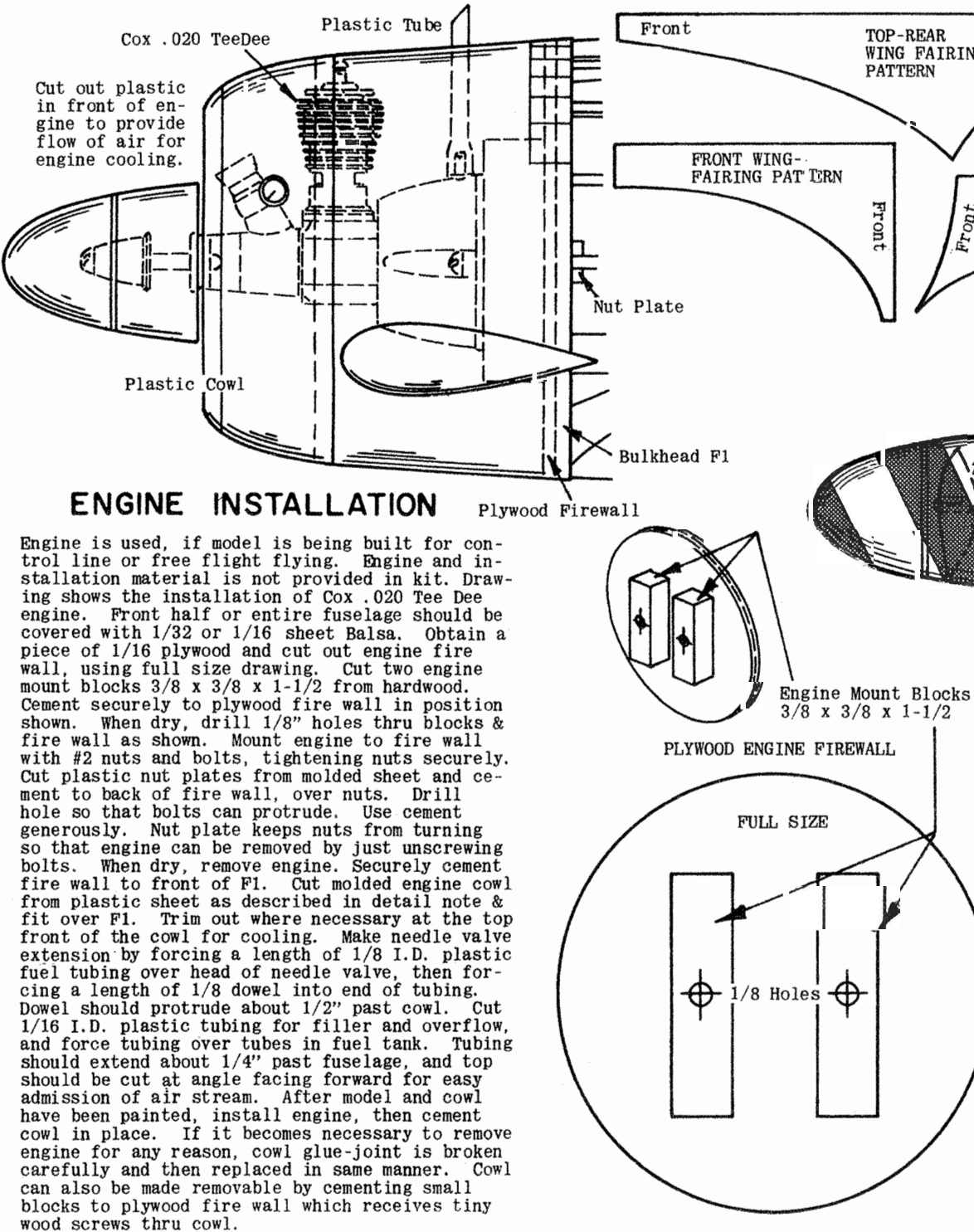
Wing Span - 34 Ft. 6 In.  
Length - 29 Ft. 4 In.  
Height - 13 Ft. 0 In.  
Wing Area - 197 Sq. Ft.  
Weight Loaded - 9480 lbs.  
Top Speed - 405 M.P.H.  
Range - 640 Miles  
Service Ceiling - 34,800 Ft.  
Engine - BMW 801D  
2050 Horse Power  
Armament - 20 13-mm machine  
guns in fuselage,  
Four 20-mm Cannon  
in Wing, Single  
500 lb. Demolition  
Bomb.



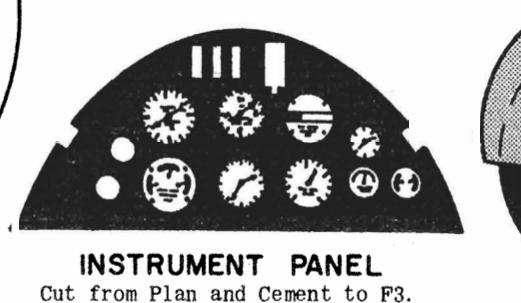
Materials required are not provided in kit. Install controls as follows: Fuselage Step 4 has been completed. Fill in area between F1 to F3, from string 15 to 17 string above it, with scrap. String 16 shows the correct placement. Also install an area from F1 to rear between 15 and string 8 above in same manner. Cut 1/8 slot in rear for control rod as shown. Cut two 15" lengths of 1/8" dia. control rod. Fasten to control rod on Mount bracket on plywood platform as described in manufacturer's instructions. Lead-out lines come thru fuselage at holes drilled for them as shown on drawing. Fuselage is now ready to be noted. Cut stabilizer thru wide main spars, as indicated by dotted lines on full size drawings. Reinforce edges. Install control horn at location shown on drawing. Cement stabilizer to fuselage as described in Final Assembly Note. Tape elevators in neutral position (in line with stabilizer, trailing edge of fuselage) and install control rod wire for control rod at right angle. Loosen bell crank and insert rod from bottom with spur vertical, then secure bell crank. Control rod should be in neutral position. Check for correct placement according to so that rod slips thru slot.

freely. Make a right angle bend at rear end of rod at precisely the location of hole in elevator horn, with bell crank in neutral position as shown. Clip off excess and insert into horn. Turn horn off. Controls are now in neutral position and must work freely and easily. Cut rudder apart on dotted lines. Notch out R1 and rear of L2 to provide clearance for rudder from elevator horn. Cement fin to fuselage. Cement rudder to fin, angled 1/2" to outside of circle flown as shown. Assemble wing to fuselage as described in Final Assembly section. Attach wing from fuselage with sa scrap, drilling holes indicated. Cement securely to wing over rib W9 as shown. Reinforce fuselage and wing guide holes with washers or eyelets. Thread three thru holes in wing guide holes and lock in place with nuts. Tighten. Fasten wing tip. Lines must be of equal length when elevator is in neutral position. Control system must operate freely and easily. CAUTION: Model must be flown with caution. Do not pull down on front control line comes down out of the fuselage. If necessary, add weight. Use regular 1/16" diameter line. Lines are: 1. Yellow. 2. Red. 3. 190. 4. GOOD LINE. 5. GOOD LINE. 6. Yellow. 7. 190. 8. GOOD LINE. 9. GOOD LINE. 10. Yellow.

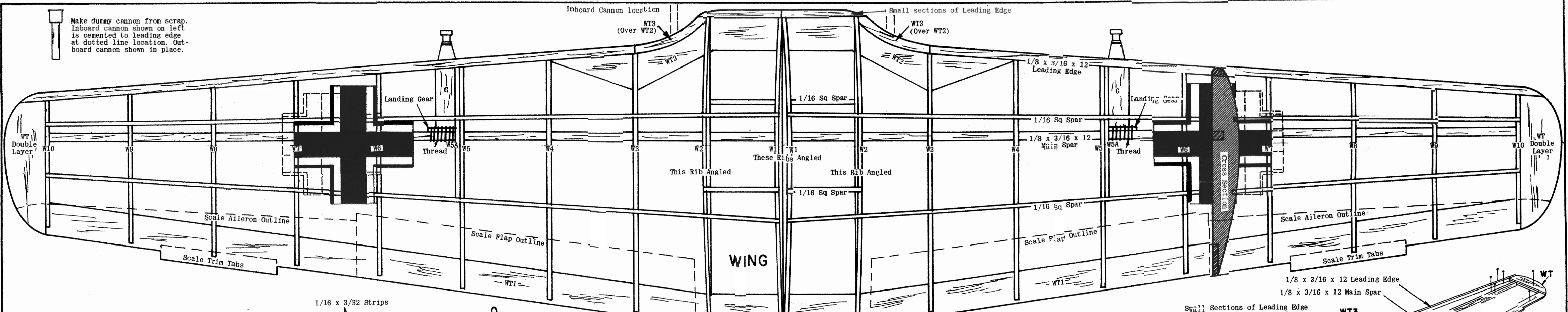
Engine is used, if model is being built for control line or free flight flying. Engine and installation material not provided in kit. Drawing shows installation of engine in model. Mount engine. Front half of entire fuselage should be covered with 1/32 or 1/16 sheet Balsa. Obtain a piece of 1/2" x 1/2" x 1/2" Balsa. Cut into two engine wall, using full size drawing. Cut two engine cement blocks 3/8 x 3/8 x 1-1/2 from hardwood. Mount securely to plywood fire wall in position as shown. When engine is mounted, install #2 fire wall as shown. Mount engine to fire wall with #2 nuts and bolts, tightening nuts securely. Tighten bolts as shown. Do not tighten so close to back of fire wall, over nuts. Drill hole so that bolts can protrude. Use cement generously. Nut plate keeps nuts from turning. Tighten so that nut plate is flush with engine bolts. When dry, remove engine. Securely cement fire wall to front of PL. Cut molded engine cowling to fit. Mount engine to front of PL. Mount fire wall over F1. Trim out where necessary at the top of the front of the cowl for cooling. Make needle valve extending to the back of the cowl. Cut 1/2" electric tubing length over head of needle valve. Then for cooling a length of 1/8" dowel into end of tubing. Needle should protrude about 1/4" past cowl. Cut 1/2" electric tubing length over head of needle valve. Then for cooling a length of 1/8" dowel into end of tubing. Needle should extend about 1/4" past fuselage, and top of needle should be flush with top of fuselage. For admission of air stream. After model and cowl have been painted, install engine, then cement engine to fuselage in place. If it becomes necessary to remove engine, it can be removed by pulling it out very carefully and then replaced in same manner. Cowl can also be made removable by cementing small strips of 1/2" x 1/2" x 1/2" Balsa to wall which receives the wood screws thru cowl.



When model has been completed, it must balance at point shown on side view. DO NOT ATTEMPT TO FLY MODEL UNTIL PROPER BALANCE HAS BEEN ACHIEVED, add weight if necessary. Model is now ready. Pick a calm day for test flying. For rubber powered models, wind propeller clockwise approximately 100 turns and launch into any prevailing wind slightly above a point on the ground approximately 50 feet ahead of the launch point. The model then falls off and stalls. (AFTER MODEL WAS BALANCED) then bend elevators down slightly, using

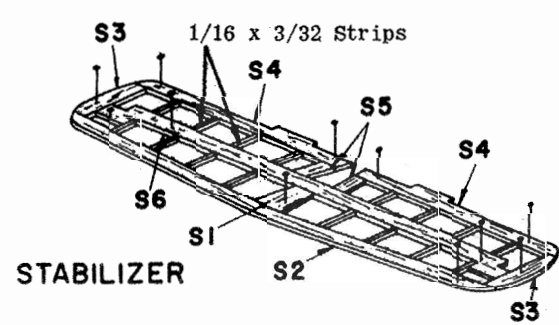




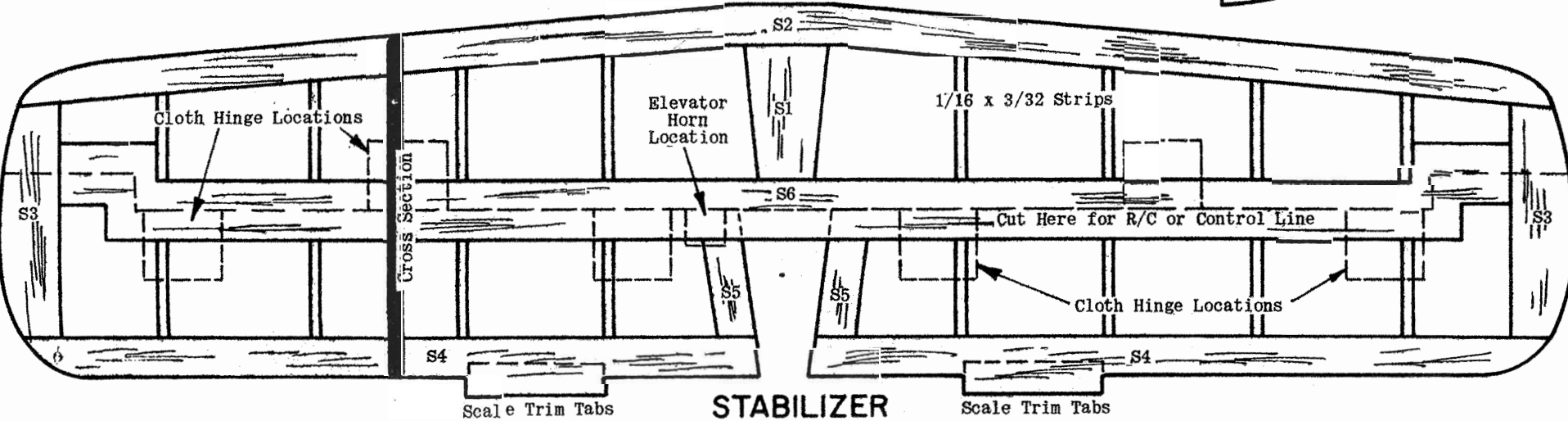


## TAIL SURFACE ASSEMBLY

Assemble stabilizer by pinning all S parts shown to plan on flat surface, and cementing to each other where they join. Cut 1/16 x 3/32 strips to fit & cement in place upright. Rudder is built in same manner, pinning all R parts to plan and cementing to each other; then adding 1/16 x 3/32 strips. Allow assemblies to dry thoroughly on flat surface, then sand smooth, rounding edges (except R6 and bottom of R1) as shown on cross-section. If model is being constructed for control line or radio, see respective detail notes BEFORE covering with tissue.

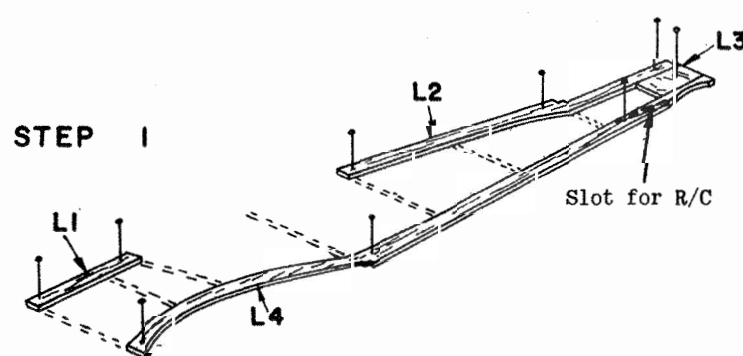


STABILIZER

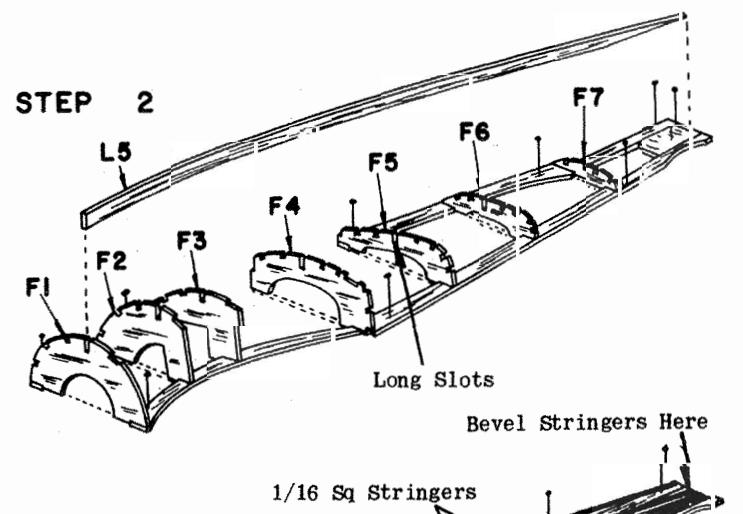


STABILIZER

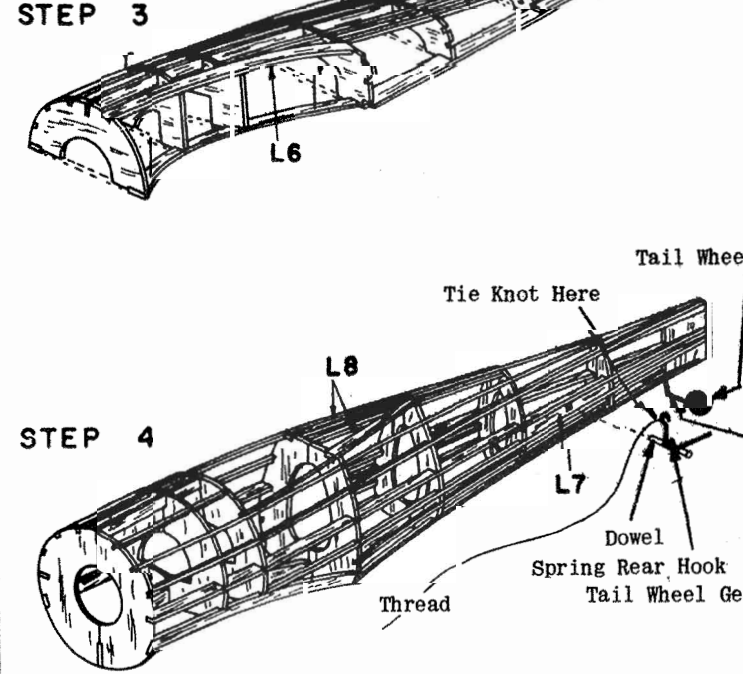
## FUSELAGE ASSEMBLY



STABILIZER



STABILIZER



STABILIZER

Fuselage construction is started on flat surface directly over plan. Pin all L parts in place as shown. If model is to be R/C, cut out slot in L4 (at rear) as shown in dotted lines. Cement 1/16 (scrap) doubler over slot, from P7 back, tapering rear into L4. Slot is for torque rod.

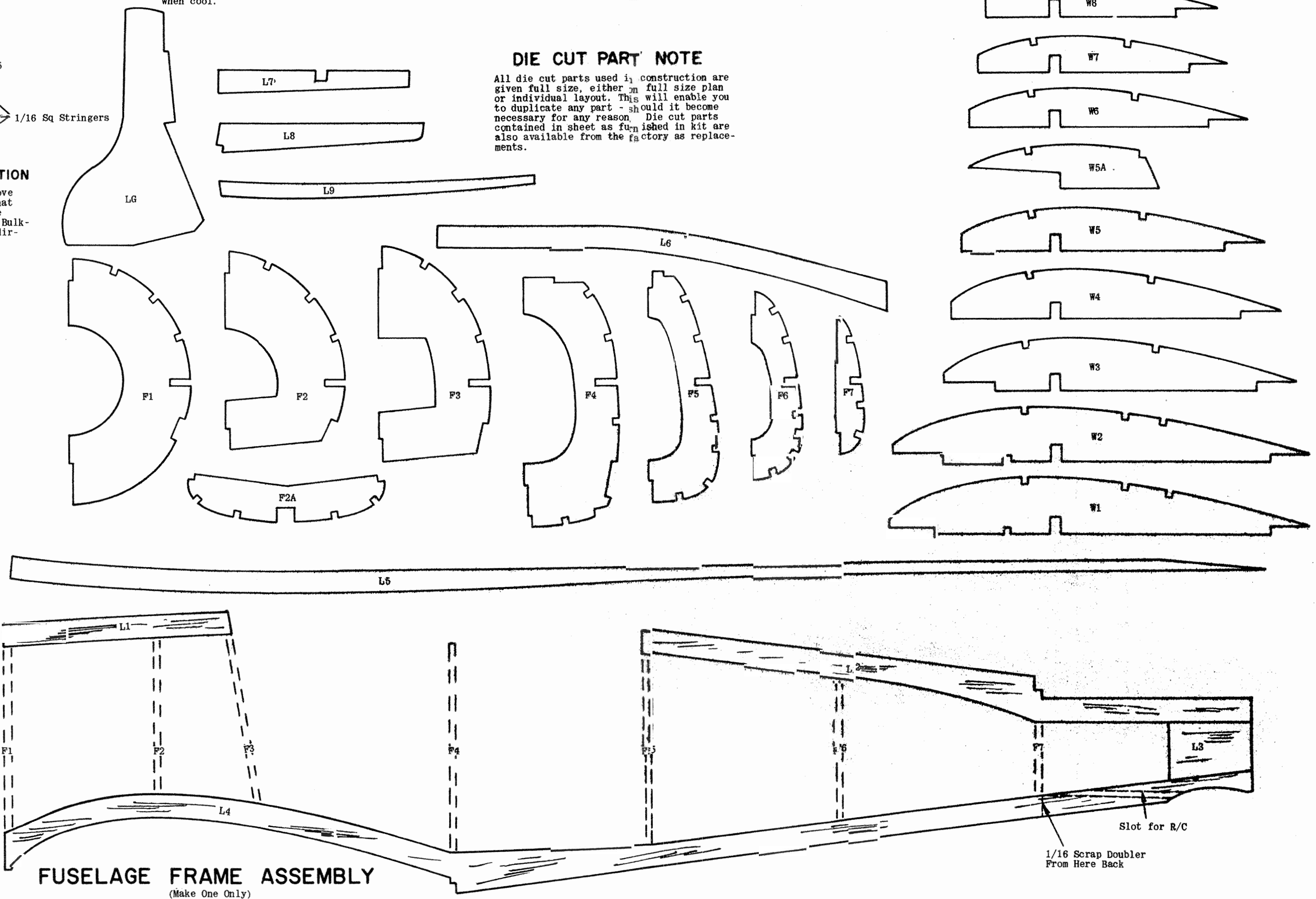
Cement all bulkhead halves from F1 to F7 vertically to frame as shown, then add L5, which is inserted into long slots in center of bulkheads.

Cement side keel L6 into notches in corners from F1 to F4. Note 1/16 space left above L6 at F3 for stringer. Install all stringers, (except 2 on bottom as shown), which are 1/16 sq, into their respective notches. Top stringers, which are not visible, can be seen in next sketch. Bevel ends to fit at rear. Allow frame to dry thoroughly to prevent warping or twisting. Over night is recommended. Assembly of wing or tail surfaces can be started in the meantime.

Carefully pull out pins and remove frame from flat surface. Cement opposite halves of bulkheads in place to fuselage frame. (Don't make another fuselage frame assembly. Bulkhead halves are cemented to fuselage frame assembly already constructed as described in Steps 1, 2, and 3. If model is being built for Control line, bellcrank platform is now installed. Cut platform from 1/16 plywood, using pattern provided at Control line note. Cement long slot into bulkhead P2 and against top of L5, followed by L6. The opposite bulkhead halves are cemented to the other side of frame as shown in typical cross section. Cement 1/16 (scrap) over open side of R/C slot, if used. Cement both L7's in place. Install spring rear hook (omit on gas powered models) by inserting a 1" length of 1/8 dowel thru coils of rear hook. Insert and cement ends of dowel between L7's. Securely cement straight end of hook to bottom of side keel L5, see side view. Only straight end of hook is fastened, leaving coil free for spring movement. Straighten top of tail wheel gear and bend 1/8 spur as shown on side view. Sink spur into front of L3 and cement securely in place. Remainder of 1/16 sq stringers are now cemented into their respective notches as shown. Cement L8's into notches from bulkheads P4 to F5. Allow fuselage frame to dry thoroughly, then sand lightly to present a smooth surface for tissue covering, described in detail note. If model is constructed other than for rubber power, see respective notes (Control Line, Radio, etc.) before covering fuselage.

## TYPICAL CROSS SECTION

Fuselage Cross-section above is at Bulkhead P6. Note that there is only one Fuselage Frame Assembly in center. Bulkhead halves are cemented directly to it - see Step 4.



## FUSELAGE FRAME ASSEMBLY

(Make One Only)

## WING ASSEMBLY

### STEP 1

Cement two WT's together and pin in place along with all other WT parts as shown, cementing where they join, except at center joint. WT3's cement to top of WT2's flush with front. Cut 1/8 x 3/16 x 12 main spars to proper length. Pin in place in upright position, joining over center, cement only to WT's. 1/8 x 3/16 x 12 is also used for leading edge. Pin in place in upright position, cementing to front of WT and WT2. Cut both small sections of leading edge & cement to front of WT2.

### STEP 2

Ribs W1's to W10's are now cemented in place. Ribs W1's & W2's are angled, using rib angle template as shown in detail sketch. This insures proper dihedral angle. All other ribs are vertical. Cement W5A's to outer sides of W5's flush with top. Cement 1/16 sq spars into notches along top of ribs as shown. Allow frame to dry thoroughly (overnite recommended) before removing from flat surface.

### STEP 3

Trim and sand leading edge to shape shown on wing cross section, then round off tips and trailing edge to blend smoothly into each other. Leading edge, spars and trailing edge are trimmed flush with angle of ribs W1. Cement halves together on flat surface, blocking up one side 3" as shown. Measurement must be the same at leading & trailing edge so that wing is not warped. Other panel is weighted or pinned to keep flat on surface. Use cement generously, & allow to dry thoroughly. Completed wing frame is now removed from flat surface & landing gear installation as shown on final assembly sketch is now made. Landing gears are cemented securely in place as shown. Top of gear rests against bottom of W5A which is angled, providing forward angle to landing gear. Rear is tied securely to spar with thread as shown on sketch and wing plan. Axles face inward towards each other. G is now cemented in place flush with bottom of rib W5. When installation is complete, apply a second heavy coat of cement & allow to dry thoroughly. Wing frame is now sanded smooth to prepare for tissue covering.

## DIE CUT PART NOTE

All die cut parts used in construction are given full size, either in full size plan or individual layout. This will enable you to duplicate any part - should it become necessary for any reason. Die cut parts contained in sheet as furnished in kit are also available from the factory as replacements.