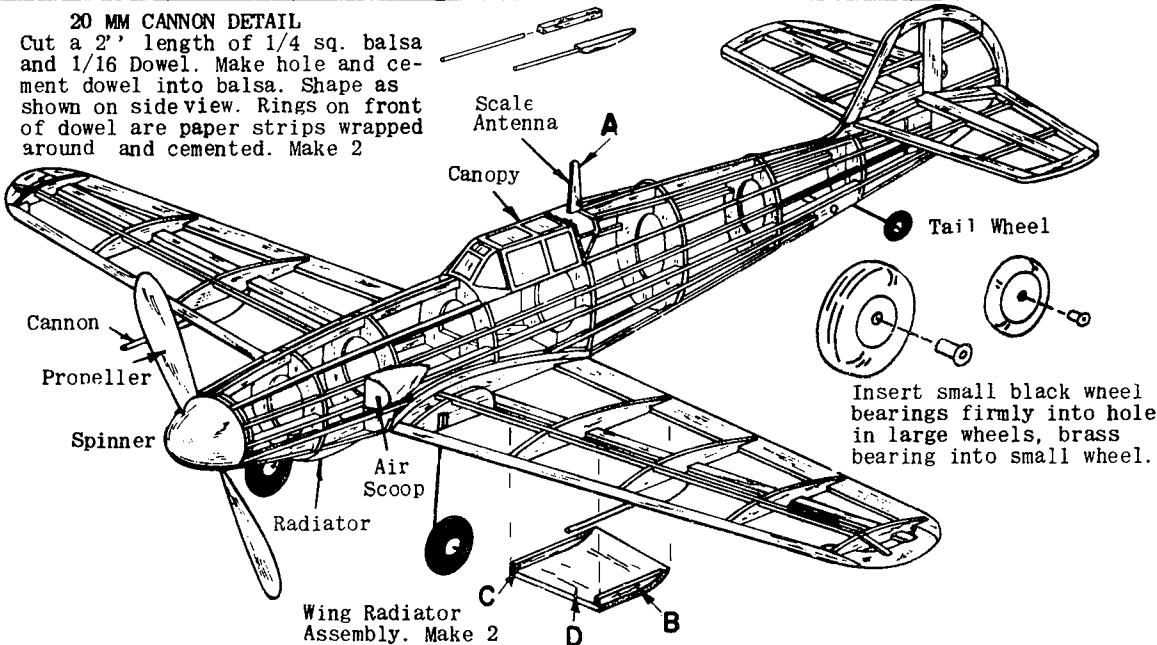


20 MM CANNON DETAIL
Cut a 2" length of 1/4 sq. balsa and 1/16 Dowel. Make hole and cement dowel into balsa. Shape as shown on side view. Rings on front of dowel are paper strips wrapped around and cemented. Make 2



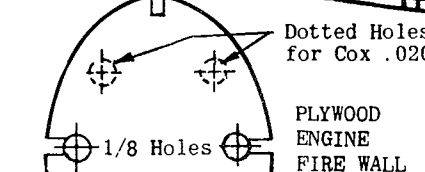
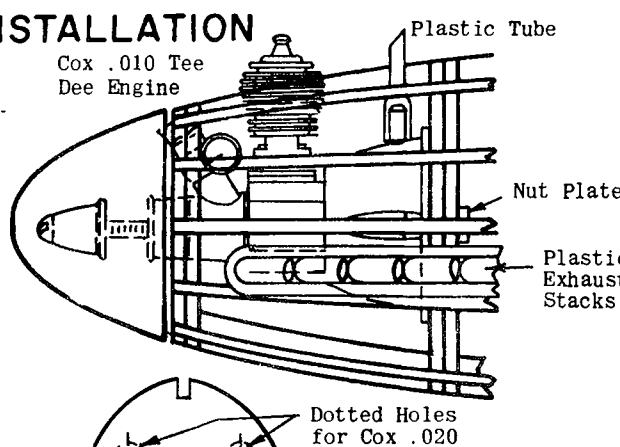
FINAL ASSEMBLY

Wing, tail and fuselage are now covered as described in Silkspan Tissue Note before proceeding. Cement wing securely in fuselage between bulkheads F3 and F5, lining up ribs W's under side keel L5's. **PRESS WING TIGHTLY AGAINST BOTTOM OF L5'S** 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 F7 and F8. 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 sq. to L6 to act as door stop, to keep door flush with surface. Add bottom in place with Scotch Tape. Cement stabilizer horizontally in place. Cement rubber to top of stabilizer and against rear of fuselage. **ALIGNMENT OF WING AND TAIL SURFACES IS NOW CHECKED.** Tips are equal distance from flat surface when model is at rest, and rudder is vertical. Make cannon and wing radiator assemblies as shown in sketch above then cement in place to bottom of wing in position shown on full size plan. Trim and assemble all plastic parts as described in detail note. Model is not 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 shown. Cut instrument panel from plan and cement to F4 in cockpit. Cement all plastic parts in place as described in detail note. Outlines of scale control surfaces may be drawn in place with India Ink. Round off scale antenna A, paint, then cement to rear of canopy as shown. Notch canopy to receive antenna first. Insert bearings into wheels and place wheels on axles. Hold wheels in place by bending up end of axles or with drop of cement or solder. 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 F1 and capture rubber. Pull through F1 and attach rubber on prop shaft. Nose bearing fits into F1. Your Messerschmitt ME-109G is now complete. Set Flight Instructions before flying. **GOOD LUCK AND HAPPY LANDINGS!!!**

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. Top front is cut out for engine clearance. Obtain a piece of 1/16 plywood and cut out engine fire wall using full size drawing drilling holes indicated. Note center holes are for Cox .010 engine, other four holes 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; drilling hole through 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. Engine is then installed after model has been painted. Add a 3/4" length of 1/16 I.D. plastic tubing to fuel tank fill and overflow tubes. Cut top of tubing at angle facing forward for easy admission of air stream. If needle valve extension is necessary, force a length of 1/8 I.D. plastic fuel tubing over head of needle valve, then insert a length of 1/8 dowel into end of tubing. Dowel should protrude at least 1/2" past side of fuselage.



PLASTIC PARTS DETAIL

For best results, follow instructions carefully. **CANOPY:** Cut from sheet and trim edges smooth, then fit in place on fuselage. Paint raised portions (same) of canopy same color as fuselage; after reading paint instructions at end of this note. **NUT PLATES:** Cut from sheet on trim lines and install as described in Engine Installation. **EXHAUST STACKS:** Cut from sheet on trim lines and install in position shown on side view. **SPINNER:** Cut from sheet, leaving 1/16" excess material for trim. Sand and trim off excess material carefully. Cut out for prop at scribe lines, then cement over propeller (lining up with fuselage). **AFTER PROPELLER IS IN PLACE:** **BOMB:** Cut out of sheet, leaving about 1/16" excess material. Carefully trim out slots on top, bottom and ends; right to the edge of

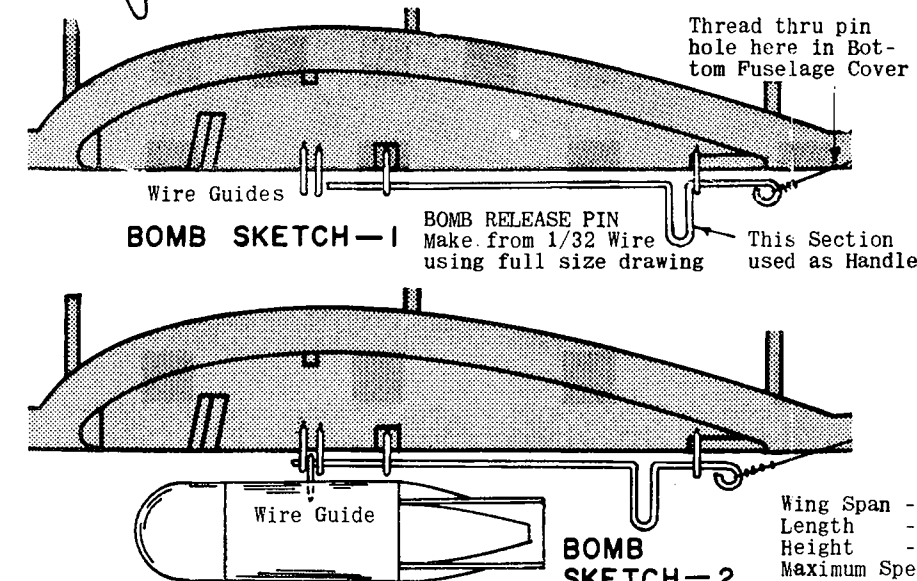
the bomb itself as shown. This permits accurate assembly of halves. Cement halves together, lining up carefully at slots. Plastic or model airplane cement is used in assembling and attaching plastic parts in place. Use sparingly however, since excessive use of cement may distort the plastic. After assembly, allow to dry THOROUGHLY, trim and sand off smooth. Cut out the four bomb fins scribed on plastic sheet. Cement fins to end of bomb at right angles to each other, along top & bottom seams and scribe lines. Make two pin holes and cement as shown and described in Step 2 Sketch of Bomb Release Detail. **PILOT:** Cut halves from plastic sheet, leaving about 1/8" material. Make 1/8" slots on all four sides in same manner as bomb, then cement halves carefully together. When

dry, trim and sand smooth. Cement in cockpit, see side view. **RADIATOR:** Cut from sheet on trim line and cement to front bottom of fuselage as shown on side view. **AIR SCOOP:** Cut from sheet along trim line and cement to left side of fuselage as shown on side view. **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, or if painting a lighter color than red, apply a light coat of white, before painting final color. Darker colors are 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.

INSTRUMENT PANEL
Cut from Plan, cement to F4

AUTOMATIC BOMB RELEASE

Automatic bomb dropping in flight operates on rubber powered models only. Installation is simple and action is positive, if directions are followed carefully. Make hole and cement eyelet in center of bulkheads F6 and F7, directly over keel. Bend five "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 bomb as described in Plastic Parts Detail and cement wire guide 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 guide 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 bomb through its wire guide. Push pin forward until line is snug. Mechanism should now look exactly as drawn in Bomb Sketch #2. Bomb is 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 bomb. **GOOD HUNTING!!!**



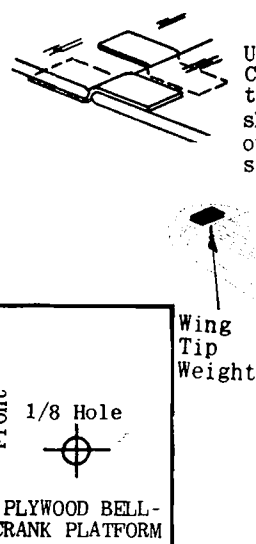
BOMB RELEASE DETAIL

Prepare installation by bending five wire guides from straight pins, and also bomb release pin from 1/32 wire, using full size patterns above. Cement four wire guides in exact position shown above, centering over joint between center wing ribs. All guides must be the same level, about 1/8" below bottom of ribs as shown. Sketch #1 shows bomb release pin handle at rear guide when motor is unwound and rear hook is in vertical position. Thread is now snug as originally installed. Sketch #2 shows position of bomb release pin when motor is wound and rear hook is in horizontal position. This loosened the thread, permitting front of bomb release pin to be inserted through wire guide on bomb and front guides on model, holding bomb in place. Sketch #2 is also used as location for cementing wire 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, dropping bomb.

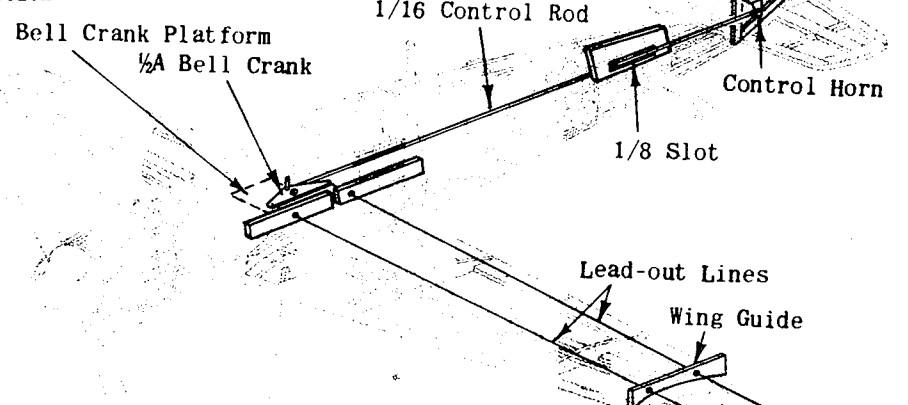
MESSERSCHMITT ME-109G SPECIFICATIONS AND COLOR SCHEME

COLOR SCHEME:
Varied according to squadron and theater of operation. Top usually dark gray or blue; bottom light gray or blue-gray. See Aug. 1961 American Modeler for Gen. Galland's ME-109 or box top.

Wing Span - 32 Ft. 6 In.
Length - 29 Ft. 4 In.
Height - 10 Ft. 10 In.
Maximum Speed - 354 M.P.H.
Cruising Speed - 315 M.P.H.
Range - 412 Miles
Engine - Daimler Benz DB 601
1100 H.P.
Terminal Velocity - 446 M.P.H.
Absolute Ceiling - 37,500 Ft.
Rate of Climb - 3100 Ft. Per Min.
ARMAMENT:
Single 500 lb. bomb, two 7.9 MM
Mach. Guns in nose, two 20 MM
Cannon in wing.



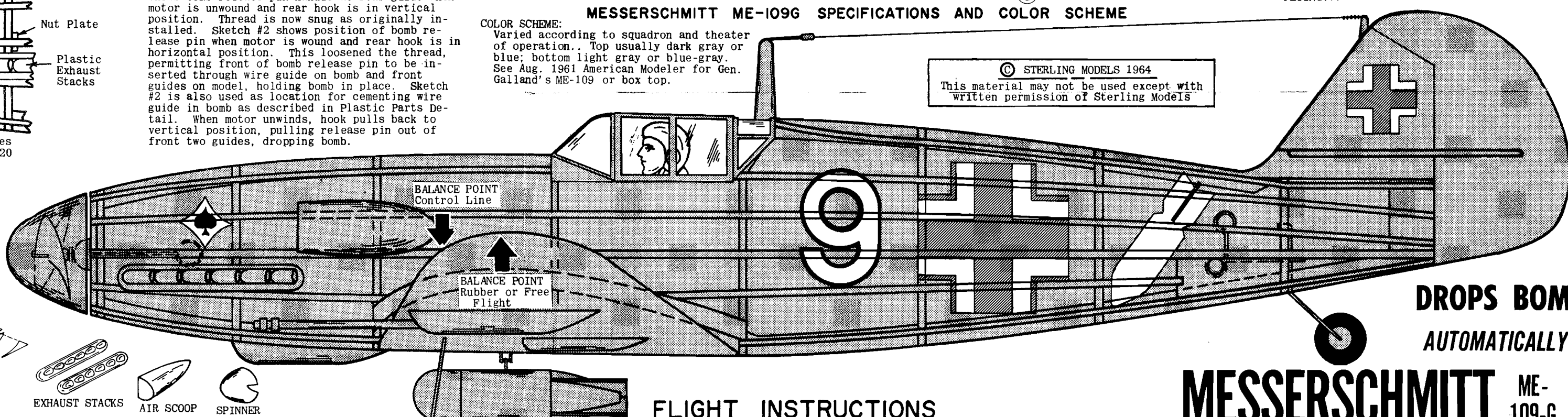
HINGE DETAIL
Use cloth tape for hinges. Cement only on top and bottom, alternating hinges as shown above. Keep cement out of hinged area between sections.



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 F3 and F5, from side keel L6 to stringer above it, with scrap 1/16 sheet balsa flush with outside of frame. Cover area between bulkhead F7 to F8, and between stringers as shown in sketch in same manner. Cut 1/8 slot in rear covering for control rod as shown. Mount 1/2A 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 F4, and on 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 nor 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 wing to fuselage as described in Final Assembly Detail. Make wing guides from 3/32 balsa, drilling holes indicated. Cement securely to wing, over rib W6 as shown. 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 wing tip. Lines must be of equal length when elevator is in neutral position. **CAUTION: MODEL MUST 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 Messerschmitt ME-109G. **GOOD LUCK AND GOOD FLYING!!!**

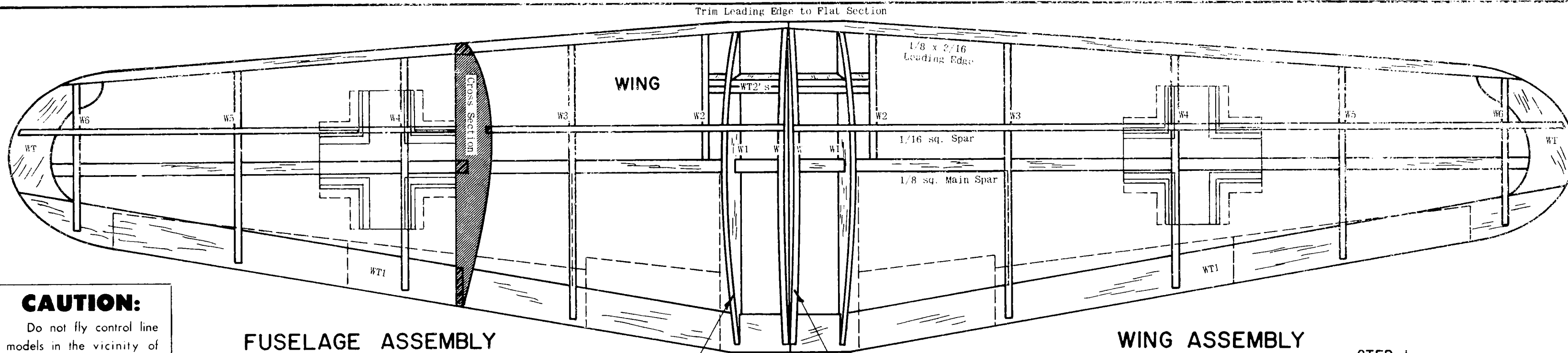


DROPS BOMB AUTOMATICALLY!

MESSERSCHMITT ME-109-G

Sterling Models
PHILA. PA. USA

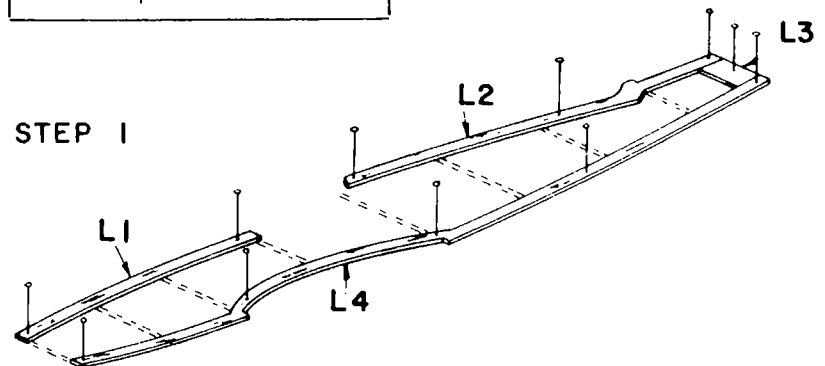
KIT A8
WING SPAN 17"
C19E03



CAUTION:

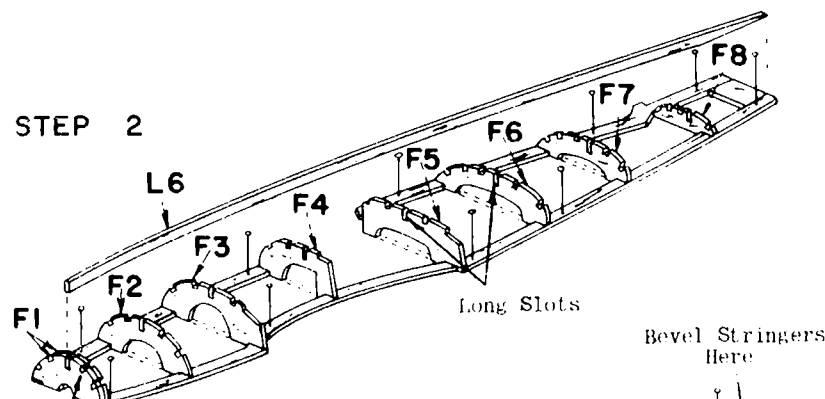
Do not fly control line models in the vicinity of electric power lines!

FUSELAGE ASSEMBLY



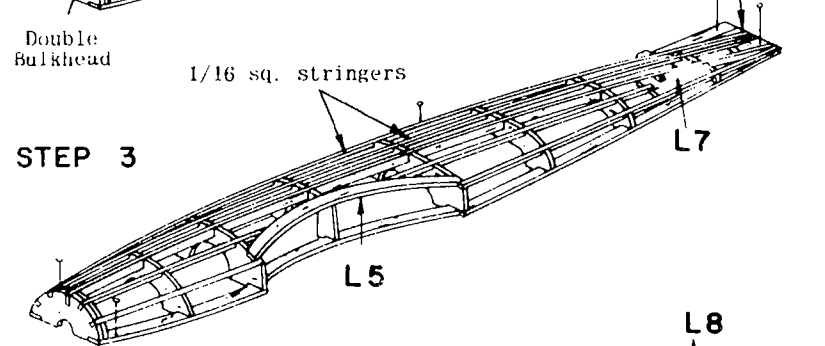
STEP 1

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



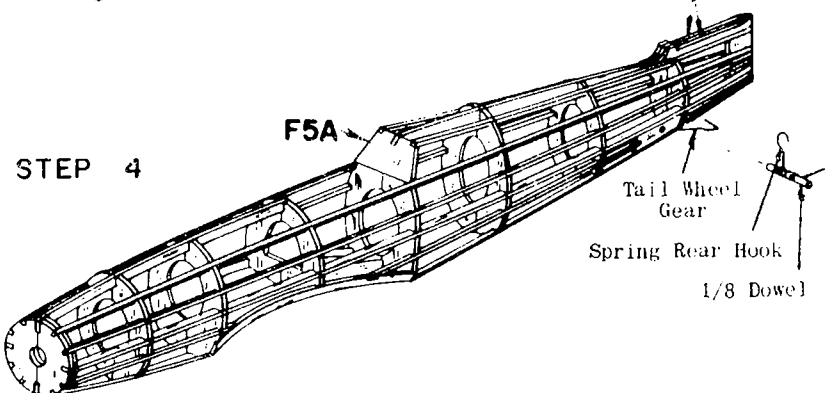
STEP 2

Cement two F1's together to form double thickness then cement bulkhead halves from F1 to F8, vertically in place as shown; then insert and cement L6 into long slots in center of bulkheads.



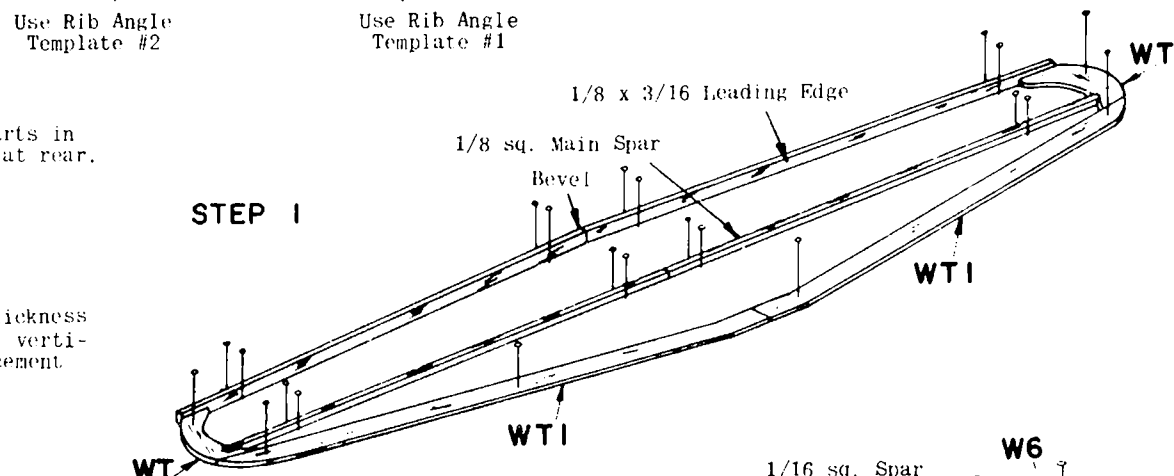
STEP 3

Pin and cement L5 into notches from F3 to F5. Push to top of notches to leave 1/16 space for stringer. Install all 1/16 sq. strips (stringers) into notches provided as shown. Omit top rear stringer. Bevel end of stringers to fit at rear, trim to fit at L5. Cement L7 against front of F8, flush with frame. Allow frame to dry overnight to prevent warping. Wing or tail can be started meanwhile.

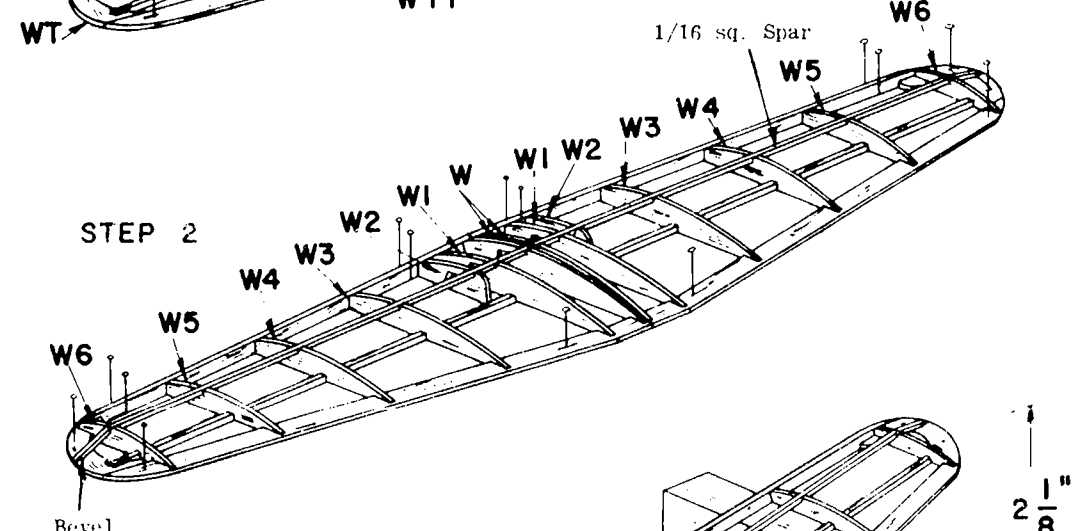


STEP 4

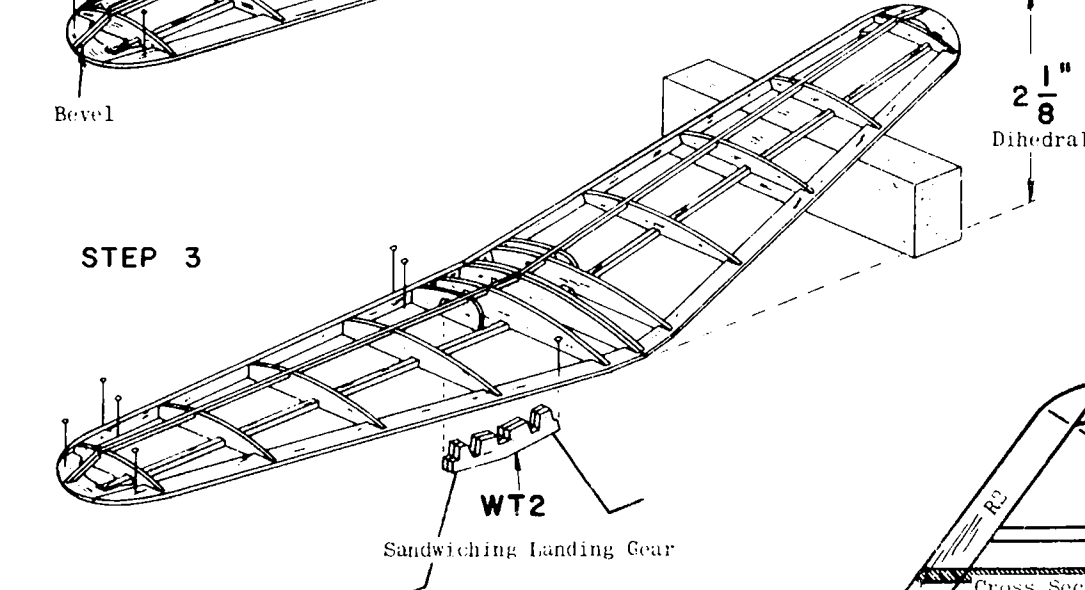
Pull out pins and remove frame from flat surface, then cement opposite halves of bulkheads in place followed by L6. Remember F1 is double. Repeat installation of L5 and L7, then add 1/16 sq. stringers in same manner. Cement F5A between top of F5 and L2, on angle as shown; then add top 1/16 sq. stringers on either side. Cement an L8 on either side of L2 flush with top as shown. 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 in L7's and cementing 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. Straighten top of tail wheel gear and bend 1/8 spur as shown on side view. Sink spur into rear of F8 and cement securely in place. 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. Round off front of L8's and taper rear to streamline shape, leaving top flat for stabilizer cementing surface. If model is to be engine powered, see Engine or Control Line Note, before covering fuselage.



STEP 1



STEP 2



STEP 3

Build wing on flat surface directly on plan. Pin all WT parts in place, cementing to each other where they join, except in center. Cut 1/8 sq. x 12 main spars to proper length. Pin in place, joining directly over center, and cement to WT's. Cut 1/8 x 3/16 x 12 leading edges to length, beveling for center joint. Pin in place in upright position, joining over center, and cementing to front of WT's.

Cement ribs W to W6 in place as shown. Center ribs W are set at angle, using rib angle template #1 as shown in detail sketch. This insures proper dihedral angle. Ribs W1's are set at greater angle using template #2 so that they will fit properly under fuselage side keels L5's. All other ribs are vertical. Cement 1/16 sq. spar into notches along top of ribs. Spar is cracked at W6 and bevelled on bottom where it is cemented to WT as shown. Allow frame to dry thoroughly before removing from flat surface.

Pull out pins and remove frames from flat surface. Separate wing halves, then trim and sand leading edge to shape shown on wing cross section. Round off tips and trailing edge as shown, to blend smoothly into each other. Trim leading edge, spars and trailing edge flush with angle of center ribs W. Cement halves together on flat surface, blocking up one side 2-1/8" for dihedral angle as shown. Other panel is pinned to keep flat. Use cement generously and allow to dry thoroughly. While wing is drying, sandwiche landing gears between two WT2's. Top of landing gear is flush with bottom of notches. Use cement generously when units are assembled, and squeeze together or hold tightly with pins until absolutely dry. In the event that model is to be engine powered, it is recommended that landing gear is duplicated with 1/16 music wire (not provided in kit) and installed in same manner. Notch out WT2's if necessary when sandwicheing. When wing frame and landing gear assembly are both dry, insert WT2's into notches across center of wing from rib W2 to W2, using cement generously. Trim bottom of WT2's flush with bottom of ribs. Allow to dry thoroughly, then sand frame smooth to prepare for tissue covering.

WING ASSEMBLY

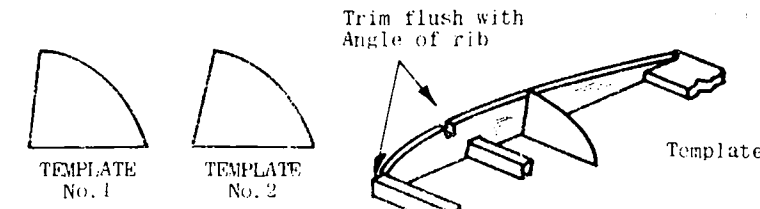
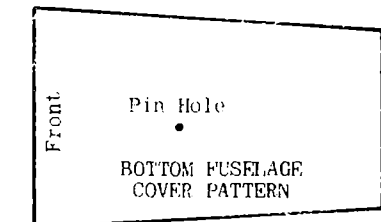
STEP 1

STEP 2

STEP 3

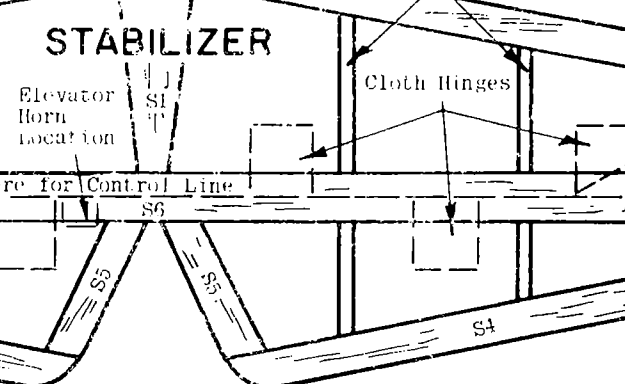
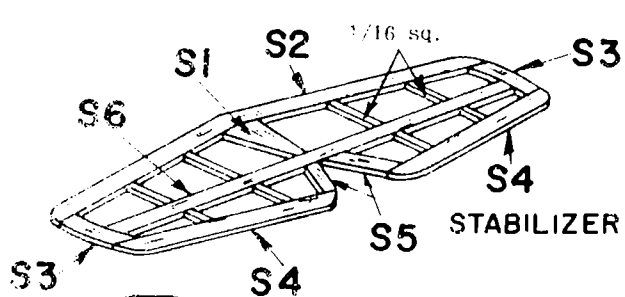
SILKSPAN TISSUE COVERING

The finest grade net strength silkspan tissue provided in this kit, permits covering of compound curves without wrinkling WHEN FIRST MOISTENED WITH WATER BEFORE APPLYING TO FRAME. Tissue shrinks when dry, to tight smooth surface. Use clear dope to attach tissue to frame as follows: Apply a coat to the outside edges of area to be covered. When dry, cut tissue to shape needed, about 1/4" larger on all sides. Place tissue on flat surface and dampen with moistened cloth. Apply a second coat of clear dope to frame, then place moistened tissue in place. Pull tissue gently with fingers, working out all wrinkles. WHEN COVERING RING AND TAIL SURFACES, PIN FRAMEWORK TO FLAT SURFACE TO PREVENT WARPS AS TISSUE DRIES. Cut out any area that wrinkles (bounded by nearest framework) and re-cover section in same manner. Apply two coats of clear dope, thinned 50-50 with thinner, on wing and tail surfaces before assembling to model. COVER WING FIRST: On control line models add about 1/4 ounce of weight to right wing tip. Cover top of wing from center joint to outer rib W6 (on each side) with one piece, then cover tips with small separate piece. Cover bottom of wing in two pieces, joining in center. COVER TAIL SURFACES NEXT: Cover both sides of rudder and stabilizer with one piece each. COVER FUSELAGE NEXT: Cut out bottom fuselage cover from stiff paper using pattern on plan, then cement in place between F5 and F6. Bomb release mechanism must be installed BEFORE REMAINDER OF FUSELAGE IS COVERED; see detail note. Cover sides of fuselage first (from front to back) with narrow pieces from 1/16 sq. stringer below L6 to second one above it. Cover top front of fuselage back to F4 in one piece. Cover upper rear sides with one piece, then cover rear top. Cover lower front sides with single piece, then cover front bottom. Cover rear sides and bottom in same manner. Apply four coats of thinned dope to tissue covering on fuselage. Check wings and tail surfaces for warps before assembling. Warps are removed by holding over steam (from boiling kettle) and twisting gently in opposite direction. Finished model must be warp-free if successful flights are to be obtained.



RIB ANGLE DETAIL

Sketch above shows how wing rib angle templates are used with Ribs W and W1 as described in Wing Step 2.



TAIL SURFACE ASSEMBLY

Assemble stabilizer by pinning all S parts directly on plan as shown, cementing to each other where they join. Cut 1/16 sq. strips to fit, and cement in place. Rudder is built in same manner, using R parts shown. Allow assemblies to dry thoroughly on flat surface, then sand smooth, rounding edges (except R1 and R6) as shown on cross section. If model is being built for control line, check note before covering with tissue.

