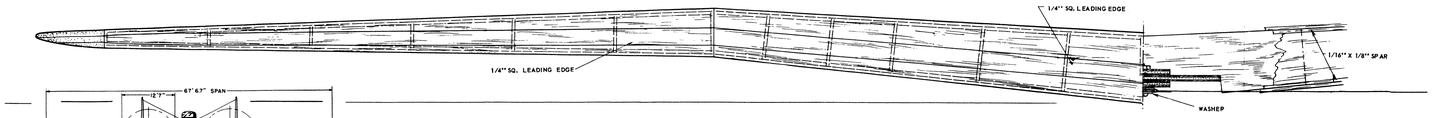
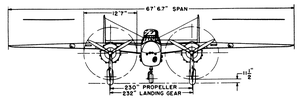
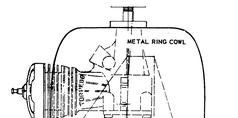
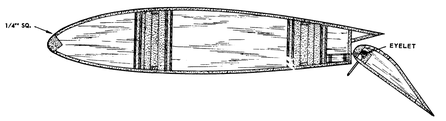
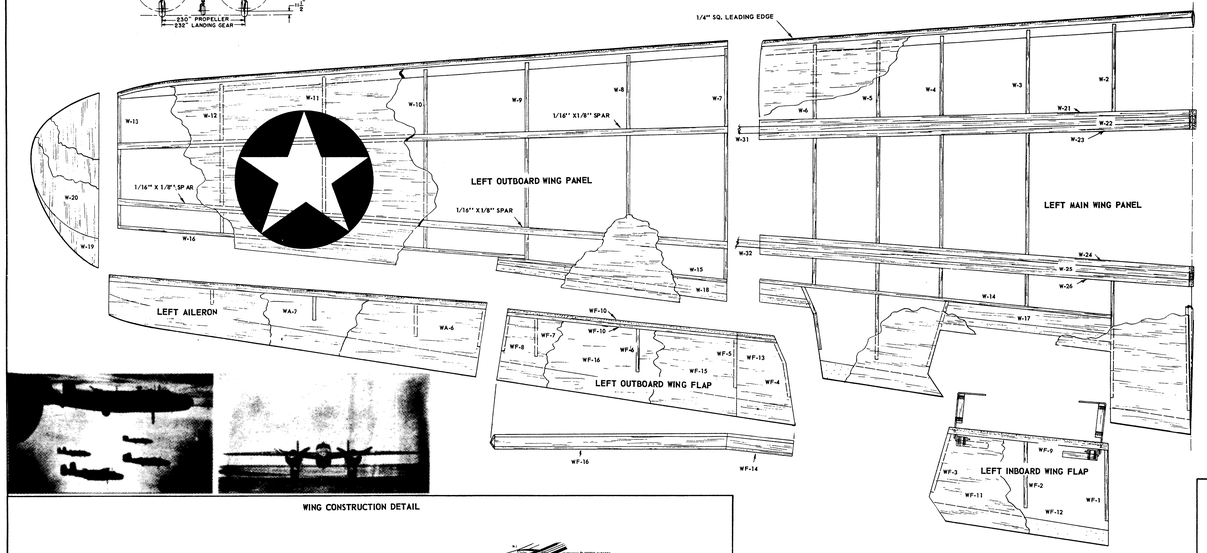
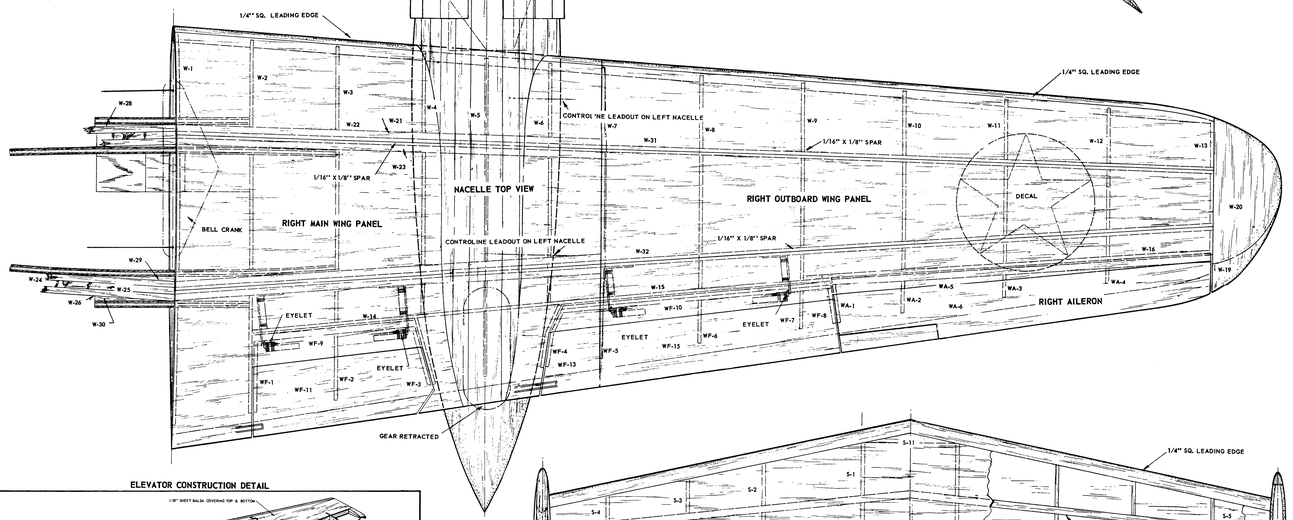


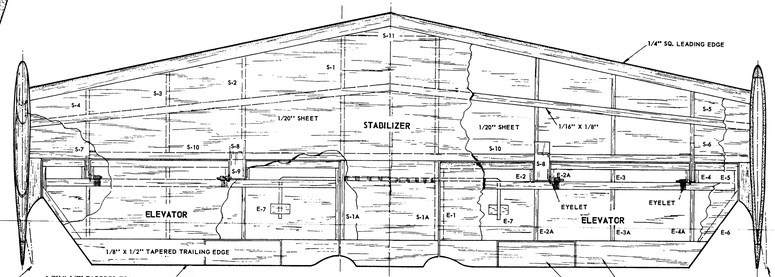


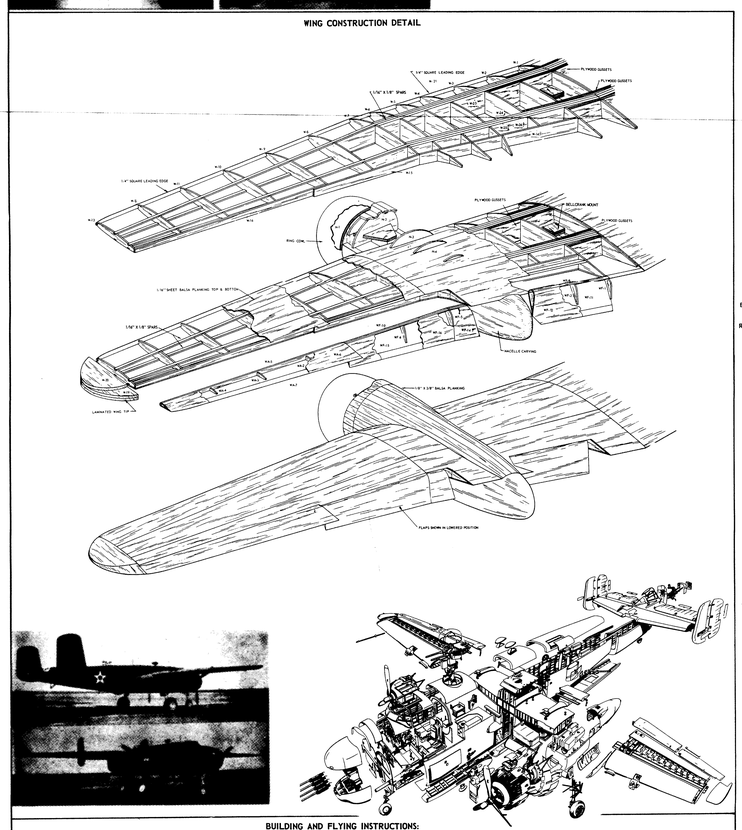


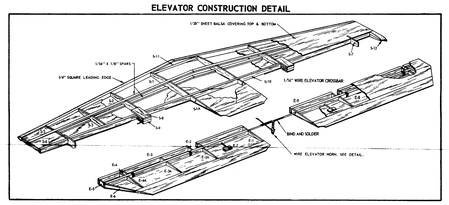


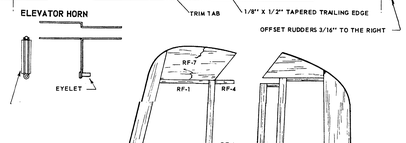


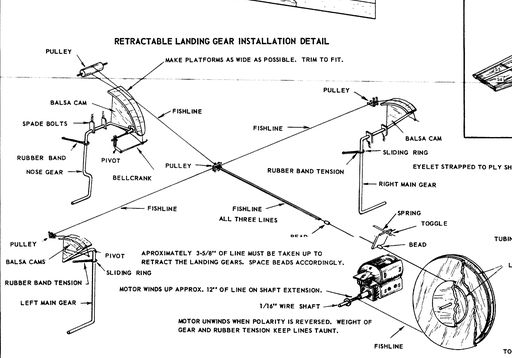


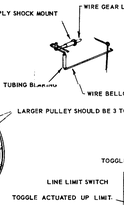


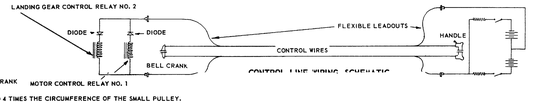






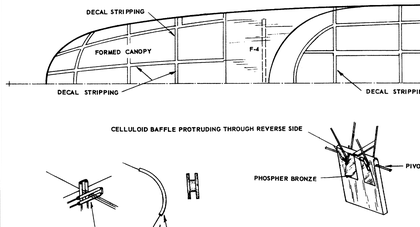




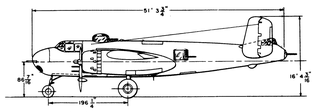


BUILDING AND FLYING INSTRUCTIONS:
RUDDER: Cut parts are shown with the exception of the 1/4" sq. leading edge and the 1-3/8" stabilizer. Assemble over plan, aligning parts as carefully as possible. Thin NEVER lubrication to minimize planing. Sand tips and bottom for flat parts. Thin planking easy to fit around the diecut large braces. Two Rudder Pins are required.
RUDDER: Construct in such the same manner as the Rudder Pin, then the tapered leading edge. Align carefully, sheet with 1/20" planking, trim and hand smooth before lightly cementing cabinets to the fins with 5-38" offset to the right. Bandpost if necessary after flight tests.
STABILIZER: Construction is well detailed on the plan. Work parts, except the spars, leading edge and stabilizer diecut. Join the two halves of the stabilizer over the plan, using a hardwood clamp or a balsa edge to allow for center planking. Sand hinge mounts are diecut. Next 360 size hinges point to the small hardware provided. Place each 1-3/8" apart, top and bottom. Pivots at Rudders are diecut lateralmost.
ELEVATORS: Once again the same general construction procedure is followed. Note the bushings found in the wing saw with thread. Diecast stabilizer is formed of 1/32" wire provided. The Diecast Horn is bored and soldered to this stabilizer. Elevator Pivots are diecut. Next 360 size hinges point to the small hardware provided. Place each 1-3/8" apart, top and bottom. Pivots at Rudders are diecut lateralmost.
ALIGNING: These are useful, in that this has to manually set in into the airplane in a most flight attitude, should not leaving clearance be noticed. Top and bottom planking in diecast, as are the spars and ribs. Sand both top and bottom diecast planking to the line drawn on the plan to allow for planking to taper to a narrow edge. Sand both top and bottom diecast from width of the side to facilitate that curvature. Allowance are to be left in diecast to provide for this procedure.
FUSELAGE: Construction is well detailed on the plan. Cut out formers and sides on both sides of the fuselage, with the Cockpit Floor carried as shown with grid diecast. Plug planking in diecast assemblage. Joint sides are formed by cracking after planking with a razor and re-cementing. Note NF-10 is tapered. Those decking spanning floor should add braces as shown. Plug bore no. Other use. Locate for supplied bolts and washers. Bore next motor mount. Later remove hold Plate in nacelle, allowing them to be pulled down for the motion of the gear, or coupled to the motor motors. Diecast Motor Mount is to be used.
HATCHARD AND PANELS: Sheet out diecut panels consisting of 1/8" x 1/8" stock and 1/16" sq. leading edge. Lay forward formers 1/16" x 1/8" spar on plan, and position ribs, locking with a pin which cement into. Add top formed spar and leading edge. Trim to fit if should be needed when dry. The hatch is now added, after which the unit can be removed from plan, and aligned to use before the cement was cured). Cement W-21 and W-22 in place, aligning ribs as they are the wing spar. Add the remaining wing ribs, cement in place, and add the top sheeting.
MAIN WING PANELS: Begin construction by fastening the main spars from the diecut 1/8" sheet parts, add the 1/16" x 1/8" spars top and bottom of W-22 and W-23. The forward spar will have to sheeted keeping to the grooved gussets to receive the diecast gussets. Do not use the diecast gussets. Add the diecast gussets, W-21 and W-22 to the spars and position the top planking is not engaged with cement. Refer to the Aileron Detail on the top of the plan to see how the aileron is to be hinged. Add the remaining ribs, cement in place, and add the top sheeting. Sand the wing to the airfoil contours.
Cement Ribs W-1, W-2, W-3, W-4, and W-5 to the forward spar, aligning with a protractor, then attach the 1/4" sq. leading edge. Follow with W-30, W-40, W-42 and W-50. Below to the W-6. Cement rear spar accurately in place, trimming up very carefully at this stage. The last main spars which dividing the ribs and sections to make the wing detachable for storage. This is extremely important, as the wing supports both the Engine Nacelles and the Main Landing Gear. Add aileron set of the wing, and sand the entire wing to the airfoil contours shown on the plan.
WINGS FOR FLYING: The Main Panels are now joined with the gussets provided. Slide the diecast metal plates, W-27, W-28, W-29 and W-30. Connect to the spars and then tapes are shown to avoid having to bend the grooved gussets. Install Dethridge Wood which allowing them to meet the grooved formers. Add remaining rib units, such as W-1, W-2, W-30, W-31, W-5, and W-50. Do not sheet plate at this time.
To join the Outboard Panels to the Main Panels, the aluminum tube plate is Wire Ring Panel spars, connecting rods. Pin holes will be provided for the Aileron Hinges to guarantee perfect alignment.
FUSELAGE CONTROLS: Trim the fuselage cartridges to a smooth fit. Be sure notation in the wood will keep the cartridge slightly short but are being ripened. This is not serious and will not change the incidence between the wings and stabilizer. When joined together sheet, the top and bottom cartridges will be bound together with rubber thread to hold tight while the cement sets.
Remove the supports left inside the cartridges by the carving machine. These will chip and easily because of the grain direction. Sand the fuselage to the contours shown. Remember that the fuselage is to be sanded to a shape to be hugged and to detail. Do not increase its relative weight.
Cut out rudder holes, top hatch, belly hatch (diven aileron). On the D-25 used on the Tinker Bell, the MIG tube was covered over for extra fuel space.
This is a review of the gear. Top, motor control action. The D-25 is designed for conventional two engine installation flying. We recommend the use the most practical method to build. To prevent twisting the nose gear wire, and retaining the wire detention, the landing wires have been diecut mounted, allowing each gear to flex rearward and upward, or out sideways, without damage to the wire. The main gear is also designed to flex in the same manner. The wire is held in the fuselage by the diecut plywood gussets as shown and detailed. Solder brazes bends are not attached gear load against the cut. A second bolster arrangement holds the gear in a forward position. This assembly is attached to the front at the plane point. The gear is now free to have with any shock, providing the rubber bobbed of landing the gear wire. This is not necessary if you wish to build the retractable landing gear version. It is optional elsewhere.
MOTOR CONTROL: Though the motor control system appears to get complicated, install a simple battery in the fuselage and a switch on the bottom. Connect one wire to the negative (brass) thumpwasher, and the wire to operate Motor one, and a wire. By using one motor for high speed and the other for low, the other positions normally used for rudder operation will give a certain engine speed. To actuate the requirements a (jointly) selective idea is suggested. A battery is wired to the control handle (see accessory) drawing) and supplies current through the control wires. These wires must be jointed to the control handle and at the fuselage. Also, a single-pole switch must be used to bridge the two wires connected to the lower pole the control wires.
Use of the push-button switches should be attached to the control handle, switch number one activates the motor control which motor number two operates the landing gear. By pushing and releasing the motor control switch, the motor will operate in one direction only. Each time the switch is pushed and released, and the engines go to high speed taken. Press and hold for the desired length of time. Many variations may be made of this arrangement. Servos, equipped requirements and other radio control actuating devices can be employed. Refer to Berkeley's book on "RADIO CONTROL" and "SERVOMEN" for more information. (These books may be purchased at your dealer for $1.00.)
FLAPS, then you may choose to tie in the wing flaps with the motor control. With two engine speed the flaps will be lowered for take-off. Then, when the motor is shut off, the flaps will be raised. Many other variations may be used. Use an experimental between individual tests on each flap and a servo motor. Then flying with limited flap movement will increase gradually as you get the feel of the changes in use.
LANDING GEAR: These builders who desire to retract the landing gear should have considerable flying experience before attempting this portion of the landing gear in flight. The retracting gear adds considerable weight. Solution .20 engines or larger are recommended. Refer to the plan for the method of retracting the landing gear.
The gear system uses two motors. The one motor is for in to counterpull any aluminum for starting/switches. Motors. This is necessary to prevent bending of the wire gears. Likewise, we do not recommend the use of a limit line for operating the gear. Electrically, at the touch of a button, you can have or lower the gear without interfering with the motor control as many times as you want during a single flight.
The action of the landing gear is as follows. Four control handle is rugged with a 3.0v-volt battery.(Screwer

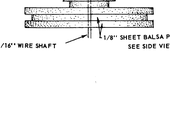
NOTE: ONLY EXPERIENCED FLYERS SHOULD ATTEMPT RETRACTABLE LANDING GEAR INSTALLATION. THIS ADDS CONSIDERABLE WEIGHT TO THE AIRPLANE, AS AN EXTRA RELAY, ELECTRIC MOTOR AND FOUR INTERMEDIATE BATTERIES MUST BE ADDED. IT ALSO MAKES THE AIRPLANE VERY COMPLEX, AND REQUIRES VERY CAREFULLY MADE LIMIT AND TOGGLE SWITCHES ETC.

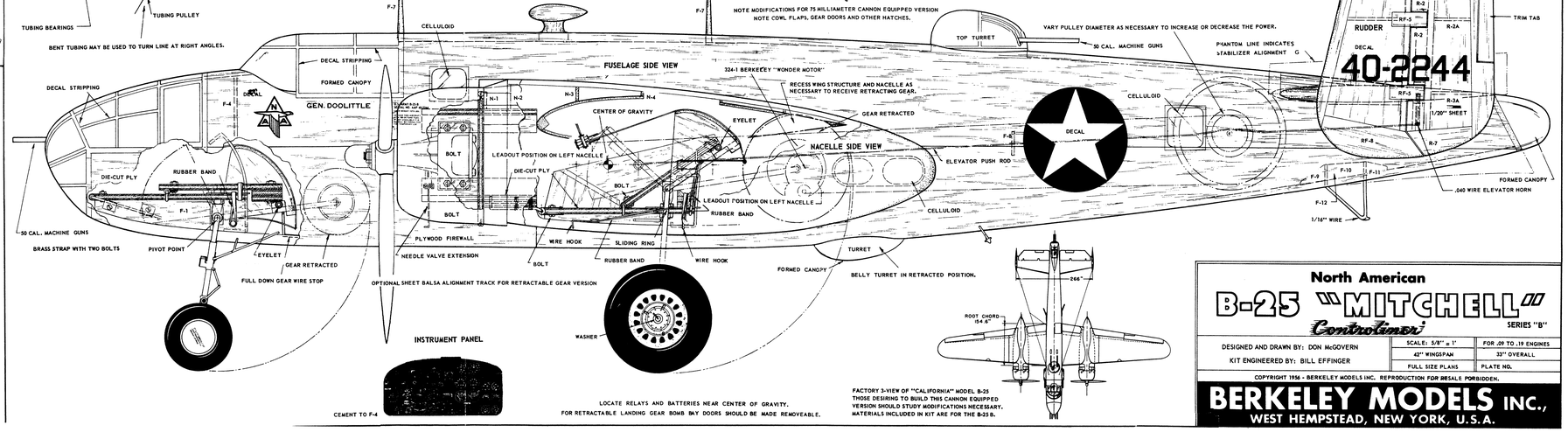


SEE 3-VIEW OF "CALIFORNIA MODEL" AND PHOTOS FOR ADDITIONAL DETAILS ON GEAR COVER DOORS AND HATCHES.



NOTE MODIFICATIONS FOR 75 MILLIMETER CANNON EQUIPPED VERSION
NOTE COWL FLAPS, GEAR DOORS AND OTHER HATCHES.





FACTORY 3-VIEW OF "CALIFORNIA" MODEL B-25
THOSE DESIRING TO BUILD THIS CANNON EQUIPPED VERSION SHOULD STUDY MODIFICATIONS NECESSARY. MATERIALS INCLUDED IN KIT ARE FOR THE B-25 B.

North American
B-25 "MITCHELL"
Controliner
SERIES "B"

DESIGNED AND DRAWN BY: DON McGOVERN
KIT ENGINEERED BY: BILL EFFINGER

SCALE: 5/8" = 1'	FOR .09 TO .19 ENGINES
42" WINGSPAN	33" OVERALL
FULL SIZE PLANS	PLATE NO.

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