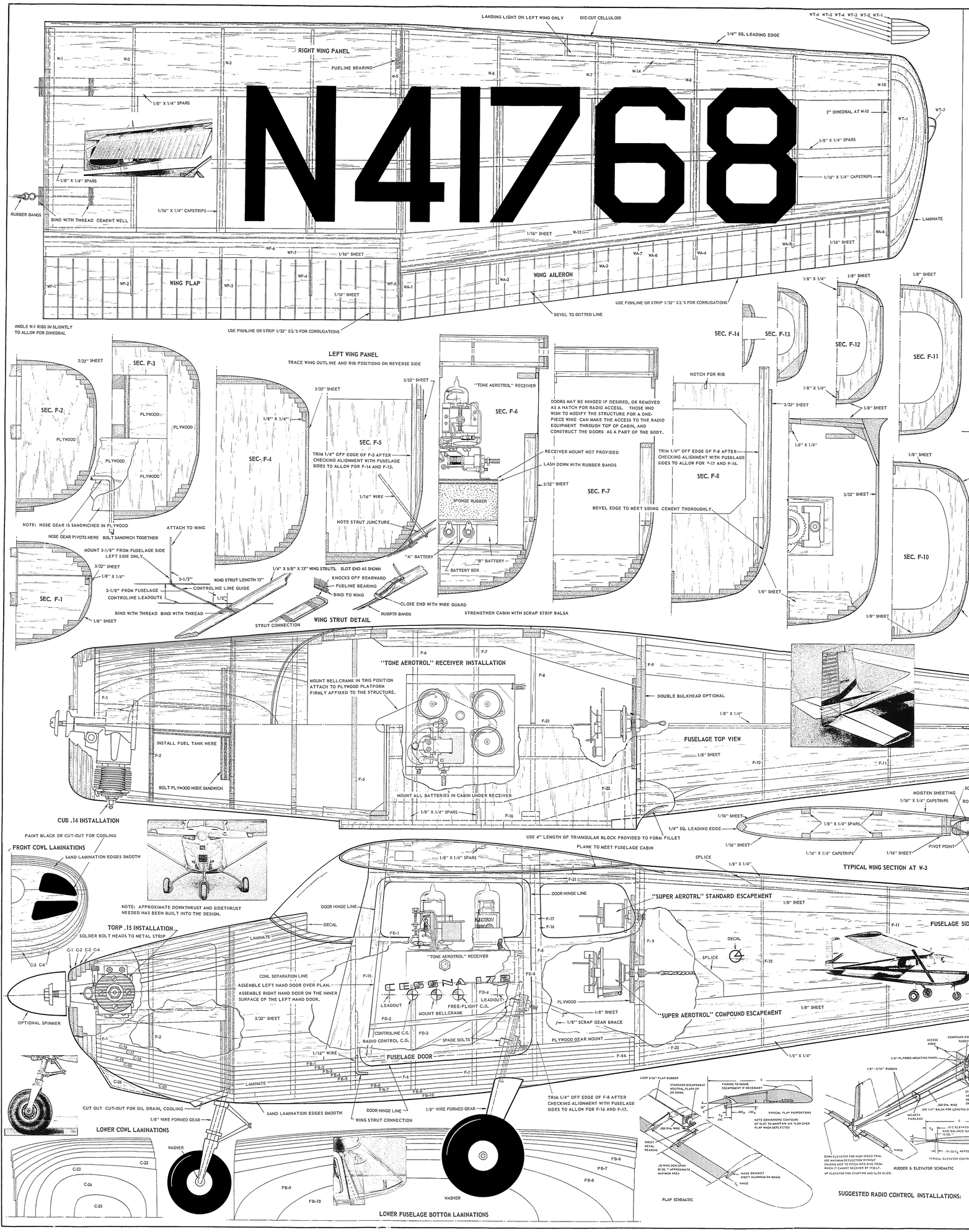
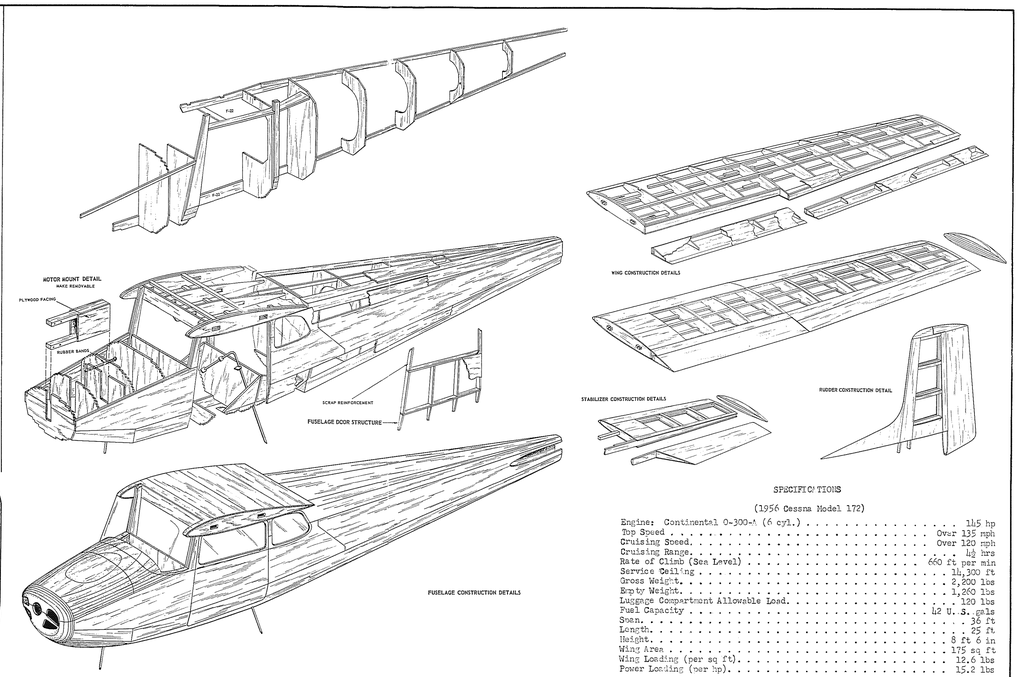
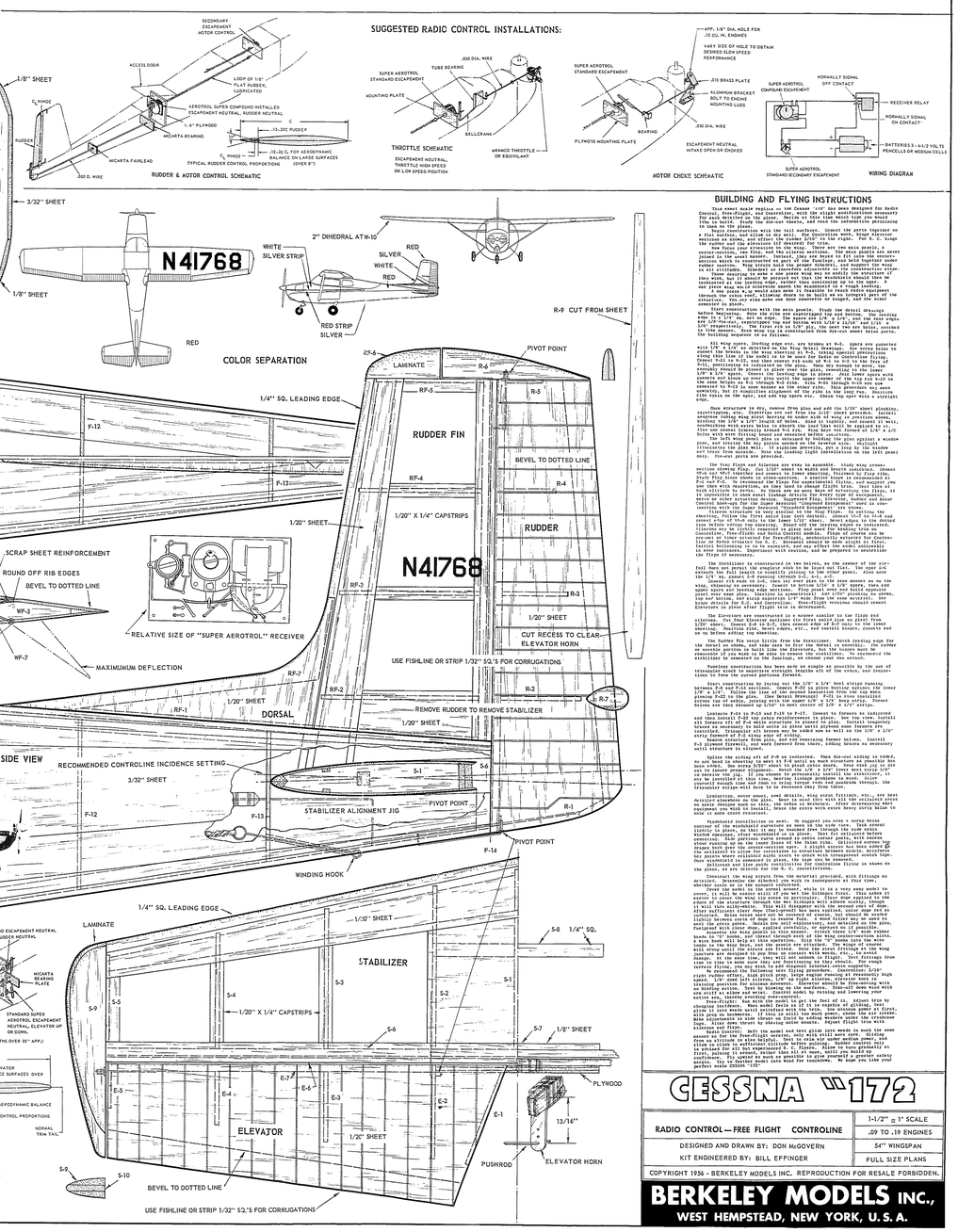




SPECIFICATIONS

(1956 Cessna Model 172)

Engine: Continental O-300-A (6 cyl.)	145 hp
Top Speed	Over 135 mph
Cruising Speed	Over 120 mph
Cruising Range	4½ hrs
Rate of Climb (Sea Level)	660 ft per min
Service Ceiling	14,300 ft
Gross Weight	2,200 lbs
Empty Weight	1,260 lbs
Luggage Compartment Allowable Load	120 lbs
Fuel Capacity	42 U. S. gals
Span	36 ft
Length	25 ft
Height	8 ft 6 in
Wing Area	175 sq ft
Wing Loading (per sq ft)	12.6 lbs
Power Loading (per hp)	15.2 lbs



BUILDING AND FLYING INSTRUCTIONS

This model scale replica of the Cessna 172 has been designed for Radio Control Free Flight. It is a scale model of the Cessna 172 and is intended primarily for each detailed on the plans. Design at this time which type you would like to build. Study the die-cut sheets, and read the information pertaining to the type you have chosen.

Begin construction with the tail surface. Connect the parts together on a flat surface, and allow to dry well. For Controline work, hinge elevator and rudder, and cement the hinges in place. Hinge right. For R. C. hinge the rudder and the elevator if desired for trim.

Now focus your attention on the wing. There are two main panels, a center section and two tips. The tips are interchangeable and can be never joined to the main center section. Select one tip and begin to fit into the center section which is constructed on part of the fuselage, and held together under the cabin area. Cement the tip in place, and check for alignment and fit in all attitudes. Change or therefore adjustable to the construction stage.

Some desiring to make a one piece wing may so modify the structure if they wish. The wing tips are cut from the sheet material provided with fillings on the leading edge, rather than continuing up to the spar. For one piece wing would otherwise match the wingshield to a rough landing.

These desiring to make a one piece wing may so modify the structure if they wish. Cement the leading edge in place. Now lower spars with cements and blocks up over plan until the upper corner of the tip rib 4-12 is in place. Cement the lower spar in place. Now the upper spar cements down to F-10 in one manner as the other rib. This procedure may seem unwieldy, but it simplifies alignment of the rib in the long run. Position the ribs on the spar, and add top spars etc. Check top spar this a straight edge.

Once structure is dry, remove from plan and add the 1/16" sheet planking, reinforcing, etc. Openings are cut from the 1/16" sheet provided. Install aluminum tubing wing strut bracing on under side of wing in position noted. Cement the wing strut bracing in place. Install the wing struts, connecting the brackets with screw holes to mount the line that will be applied to the flies and cement liberally around 9-2 rib. Wing tips are formed of 1/8" x 1/2" balsa bent to shape and cemented in place. Sand to shape.

The left wing panel plan is enlarged by behind the plan against a wooden rule, not leaving the key pieces needed on the drawing side. Initial construction of the left wing panel is identical to the right side. Follow the instructions for the right panel, except for the left wing panel. Pre-cut parts are provided.

The Wing Flaps and Ailerons are easy to assemble. Study wing cross-section. Cut 1/16" sheet to match and shape indicated. Cement top and bottom sheet to structure. A similar flap is recommended for Free Flap Wing shown in construction. A similar flap is recommended for use then with deadstrings, as they tend to change flight trim. Test them in the air before using. Cement the hinges in place. Hinge right. Test hinges to insuring in each case linkage mechanism. Install servo in the fuselage, or servo or other actuation device. Suggested Flap, Elevator, Rudder and door structure is shown in the construction section. Suggested Equipment is shown in construction with the Super Aerotrol "Standard Equipment" are shown.

Stiffeners structure is very similar to the Wing Flaps. In cutting the stiffeners, cut the 1/16" sheet to match and shape indicated. Cement the sheet top of the ribs to the lower 1/16" sheet. Bevel edges to the dotted line before adding top sheeting. Round off the leading edges be indicated. Cement the hinges in place. Hinge right. Test hinges to insuring in each direction. Free-Flight and Radio Control models. Flaps of course may be pre-set or lower actuated for Free-Flight, mechanically actuated for Controline. Test in calm air under medium power, and adjust the flaps for initial balance to be in opposite, and may effect the model adjustment in some instances. Experiment with caution, and be prepared to neutralize the flaps if necessary.

The Stabilizer is constructed in two halves, as the center of the airfoil is cut out to allow for the fuselage. Cement the two halves together behind the fuselage to simplify joining to the other panel. Add sides of the 1/4" sq. cement 3-8 running through 5-2, 5-1, and 5-6 cement the 1/4" sq. cement 3-8 running through 5-2, 5-1, and 5-6 cement the 1/4" sq. cement 3-8 running through 5-2, 5-1, and 5-6 in the same manner as on the wing, adjusting as necessary. Cement the bottom 1/16" x 1/4" spars, then add upper spars and leading edge sections. Plug proof over and build opposite side in the same manner. Add the tip ribs, and the 1/16" sheet planking, top and bottom. Add single separating 1/4" wide from the nose material. See hinge details for R.C. and Controline. Free-Flight versions should cement Elevators in place after flight trim is determined.

The Elevators are constructed in a manner similar to the Flaps and Stabilizer. Cut the 1/16" sheet to match and shape indicated. Cement the 1/16" sheet. Cement 5-8 to 5-3, then cement edge of 5-7 only to the lower sheeting. Position rims, bevel edges, etc., and install hinges, inserts and so on before adding top sheeting.

The Rudder fin varies little from the Stabilizer. Notch leading edge for the Rudder Post. Cement the post in place. Cement the Rudder post to the top of the horizontal portion in built side the Elevators, but the hinges must be removable if you want to be able to remove the stabilizer. To recement the Rudder post to the horizontal portion of the Stabilizer, use glue.

Fuselage construction has been made as simple as possible to the use of triangular stock to negotiate straight lengths at of the cabin, and longerons to form the curved portions forward.

Start construction by laying out the 1/8" x 1/4" keel strips running between 1-1 and 1-2 on the plan. Cement the longerons in place, and add cross 1/8" x 1/4". Follow the line of the second longeron from the top when placing F-20 on the plan. The Detail Drawings F-21 to rive installed longerons, and cement in place. Cement the 1/8" x 1/4" longerons and Stiffeners are then attached up 1/16" to meet edges of 1/8" x 1/4" strips.

Laminate F-14 to F-15 and F-16 to F-17. Cement to formers as indicated and then install F-22 top skin reinforcement in place. Lay top view. Install all formers aft of F-8 while structure is shown in plan. Install temporary formers forward of F-8 to hold structure in place. Cement the formers in installed. Straighten all boxes and be sure as well as the 1/8" x 1/4" strip forward of F-8 stays edge of siding.

Install the formers forward of F-8 and the remaining former braces. Install F-9 plywood firewall, and add forward floor frame, adding braces as necessary until structure is aligned.

Define the siding aft of F-8 as indicated. When die-cut siding is added, do not bend to shooting to meet at F-8 until as much structure as possible has been built. Cement the siding to the structure, and bend to shape. Do not bend to meet the jig. If you choose to permanently install the stabilizer, it is easier to build the fuselage in the inverted position. Make yourself enough time and cement to bring formers and paddock through. The triangular strips will have to be removed very from there.

Longerons, motor mount, cowl details, wing strut fittings, etc., are best detailed elsewhere on the plan. Bear in mind this with all the unfinished areas of the fuselage. Cement the motor mount in place. Cement the engine components you like to install. Make the cabin with very heavy strip balsa to make it more crash resistant.

Windshield installation is next. We suggest you make a wrap brass contour of the windshield expansion as used in the plan. Use brass contour to bend the windshield to shape. Cement the windshield in place. Install window moulding, after windshield is in place. Use the window moulding cements. Side portions curve into the fuselage. Cement the windshield to the fuselage. Install the side panels. Cement the windshield to the fuselage. Install the side panels. Cement windshield to the fuselage. Install the side panels. Cement windshield to the fuselage. Install the side panels. Cement