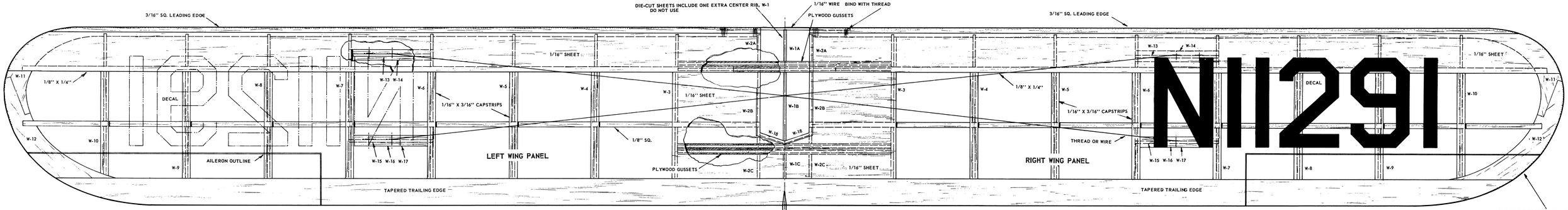
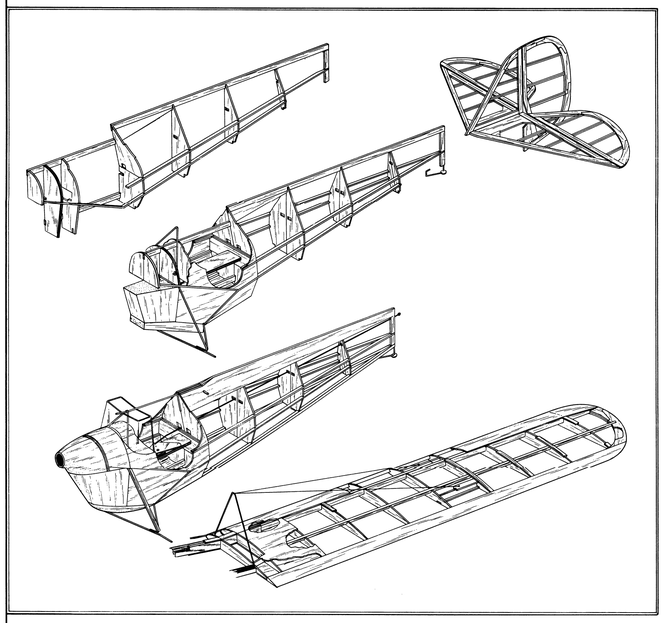
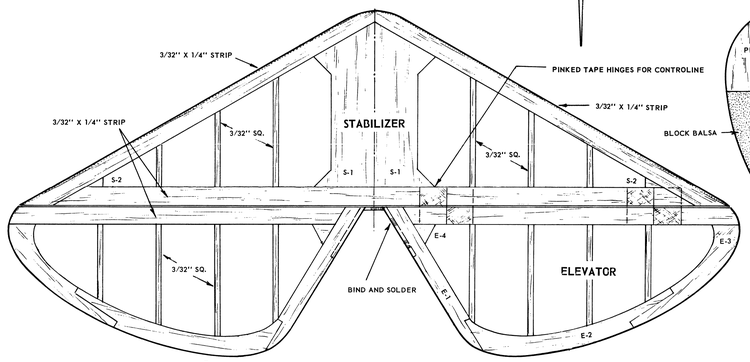
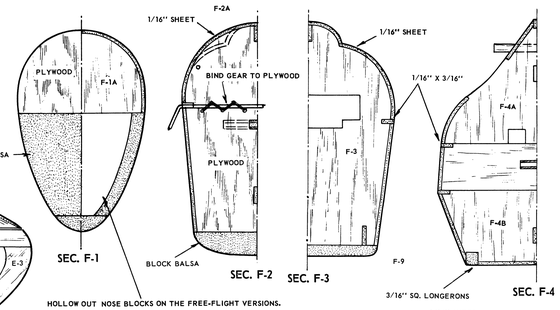


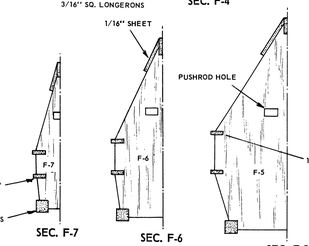


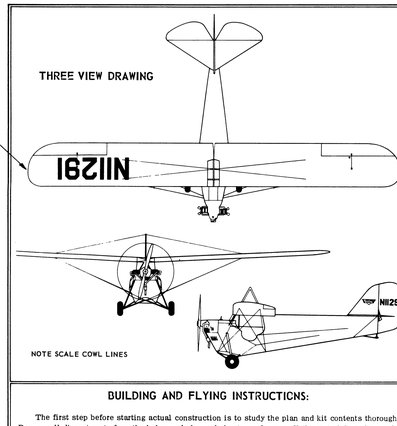




GEAR INSTALLATION DETAIL

COLOR SCHEME IS OPTIONAL AS ALL "C-3" PLANES STILL IN EXISTENCE HAVE BEEN RECOVERED AND REPAINTED SEVERAL TIMES.





BUILDING AND FLYING INSTRUCTICNS:

The first step before starting actual construction is to study the plan and kit contents thoroughly. Remove all die-cut parts from the balsa and plywood sheets, and group all the materials to be used for the wing, fuselage etc, together. The time so spent will make the job of assembly just that much easier. Decide at this time wether you wish to build the model as a Free-Flight or Controline.

WING CONSTRUCTION: Start construction with one wing panel. First pin the tapered trailing edge to the plan. Ribs W-4 through W-10 are then pinned to the plan, and cemented to the trailing edge. Rib W-3 is now shimmed up 1/16" off plan (to allow for center section planking) and is also cemented to the trailing edge. Next cement the leading edge in place. Plywood gussets are now cemented together, as seen on the plan. The two thinner gussets are joined to one another, with the bottom edges flush with one another. Shim the assembled plywood gussets 1/16" off plan and pin in place. Remaining rib sections at wing center may now be installed. Cement wing tip laminations W-11 and W-12 together, and block up 1/8" off plan at point where the two join. Spars are now installed.

The opposite wing panel is now assembled in much the same manner, though of course in this case the first panel should be propped up to allow the plywood gussets to lie flat on the plan. (Shim up 1/16" off plan as before)

W-13 through W-17 units are next installed, to form a mount for the rigging wires or thread. A small .040 wire hook should be fashioned and attached to the mounts on both top and bottom camber. Try to get a little spring action in the wire to keep rigging taut. Bind 1/16" wire to leading edges to bridge center-section. Add sheeting to wing center, top and bottom, and along leading edge on the top camber only. Mount the .040 wire rigging support now. This is bound and soldered to the leading edge and bears on W-1A. At the rear, it is secured to the plywood gussets. Add celluloid, sand wing smooth etc.

TAIL SURFACES: Those who wish to make the model as a Controline will have to add pinked tape hinges, a 1/16" wire cross-bar, elevator horn, and 1/8" right rudder as shown. The elevator cross-bar is shown on the elevator plan. Bend the elevator horn to conform to this shape (as far as the centerline) and bind and solder it to the cross-bar before attaching to elevators. See side view for length. Novice Controline flyers should extend this length another 1/8". The actual structure of these surfaces is very simple as they lie flat on the plan, and curved parts are die-cut.

FUSELAGE: The fuselage is quite easy to assemble on this model. Position the 1/8" x 1/4" top keel strip on the plan, and also the two 1/8" x 1/4" strips through the cabin area as seen in the first detail drawing of the fuselage. The former halves are next installed as shown in the detail, and the straight 1/16" x 3/16" stringers are then added. Note the formers must all be shimmed up 1/16" off the plan to allow the other former halves to join on the center of the keel strips. When the structure has dried, remove it from the plan and construct the other side in like manner, but build directly on the structure rather than on the plan.

The landing gear should be installed as you proceed with the structure. The gear is bound and cemented to plywood former F-2. Use thin wire or No. 6 thread for this. Once in place, the lower nose blocks are installed, (hollowed if desired) and the 1/16" x 3/16" stringer units installed (running from the lower block to the side stringer. Determine space with rear plywood gear mount. This mount should also be installed at this time, with gear attached. Before installing the forward section of the gear, it is wise to trim the excess from the block balsa. Round off corners etc.

The 3/16" sq. longerons may be added at this point. These were not installed earlier as the slight curvature required of them would tend to mis-align the fuselage of the partially completed structure. The plywoow bellcrank mount assembly is optional and may be omitted if so desired.

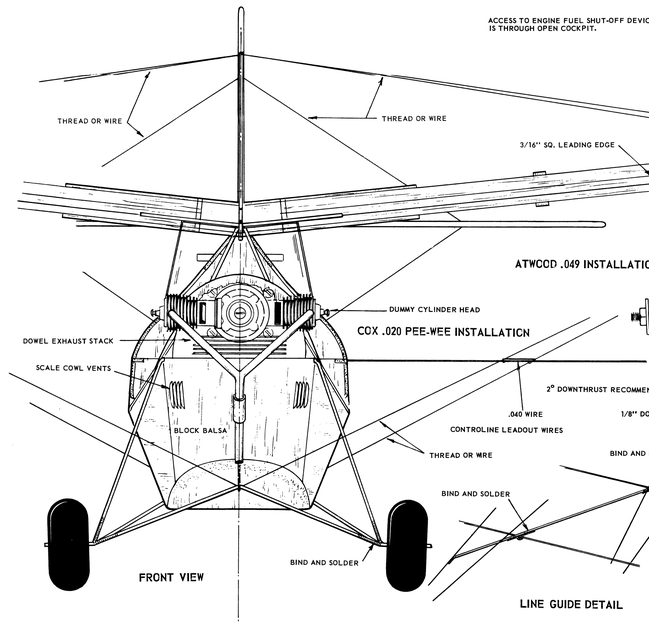
At the lower right of the plan is a wire layout. Form one of 1/16" wire, bending at right angles at point indicated. Attach to former F-2 at punch marks. Bend another length of wire at cabin roof (as seen in side view) Position, and bind and solder to the cabin support wire. A .040 wire frame is now constructed to support the celluloid windshield.

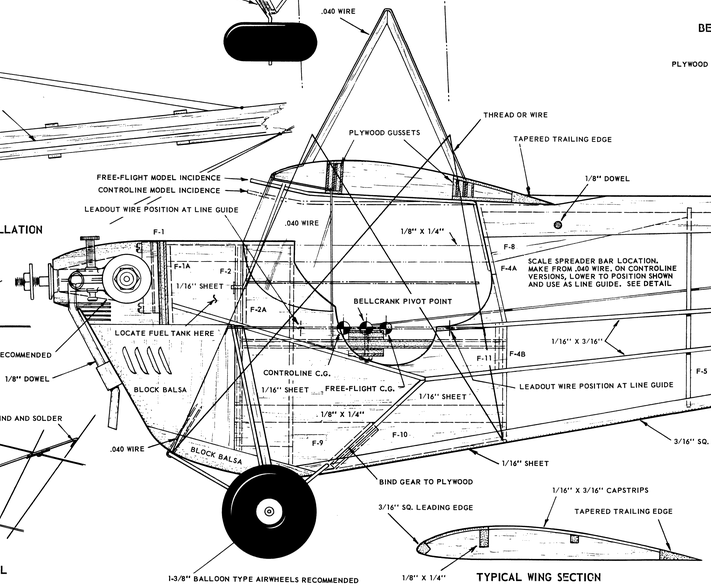
All sheet balsa areas of the fuselage are now planked. 1/16" sheet is used throughout as indicated. Moisten curved sheet areas if necessary. Note sheet is set in flush with stringers, not on top of them. The sheet is also flush with the plywood F-1 motor mount.

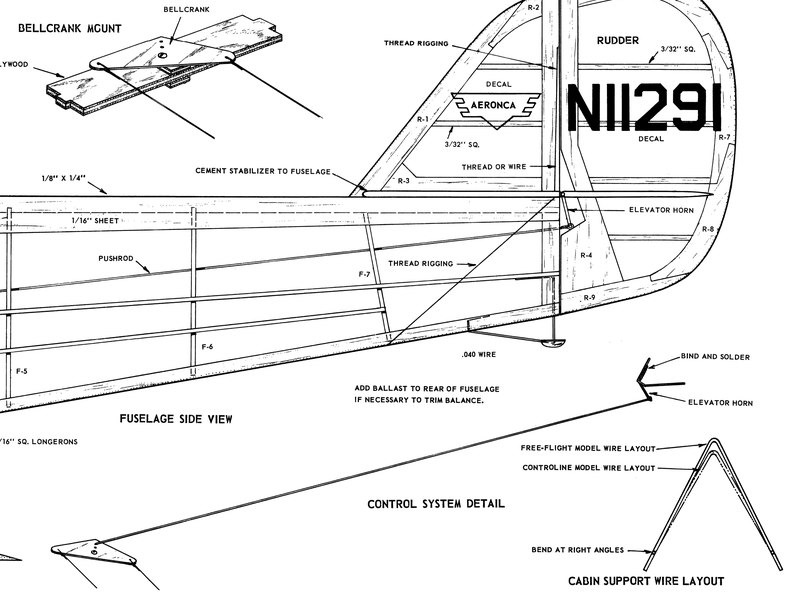
Motor cowl blocks are now tack-cemented in place and trimmed and hollowed. Cut away as necessary to cowl your engine. The engine is now mounted in place. (Note: Those desiring to install beam mounted .09 engines should mount them inverted, and alter the structure as necessary to take the motor mounts. We do not recommend engines of this size in this plane.

Install wire hooks in fuselage for rigging wires to secure to. Use wire for rigging Controline model or thread (No. 6) for free-flight. Try to keep spring tension in hooks. Note that the rigging is mainly responsible for holding wing aligned. Use lighter thread for rigging on test flights.

Cover model in normal manner. The straight lines of the model simplify the task. Test on a calm day, flying with .020 engine free-flight, or a throttled-down .049 Try prop on backwards.







USE CONTROLINE WIRE FOR RIGGING ON CONTROLINE MODEL
USE NO. 6 THREAD OR LIGHTER FOR RIGGING ON FREE-FLIGHT MODEL.
(THREAD SHOULD BREAK ON HARD IMPACT TO AVOID DAMAGE.)

AERONCA "C-3"

FREE-FLIGHT ... CONTROLINE

DESIGNED AND DRAWN BY: DON McGOVERN	.049 ENGINES CONTROLINE	FULL SIZE PLANS
KIT ENGINEERED BY: BILL EFFINGER	.020 TO .051 · FREE-FLIGHT	SCALE: 1" = 1'
	36" WINGSPAN	KIT NO. 4-12

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